English

PowerMaxComplete

Fully Supervised Wireless Alarm Control System

Visonic®

Installer Guide

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MESSAGE TO THE INSTALLER

The PowerMaxComplete control panel is supplied with 2 instruction manuals:

■ **Installer Guide** (this manual - for your exclusive use)

■ **User's Guide** (for your use during installation only - Must be handed over to the master user after testing the system).

Appendices A.1 and A.2 will help you prepare an installation plan. Please take time to fill out the forms - your job will become much easier and confusion will be prevented. Filling out the forms will also help you create a list of detectors and transmitters that must be obtained for the particular application. Compatible detectors and transmitters are listed and described briefly in Appendix F.

Remember - it is advisable to power up the control panel temporarily after unpacking and program it on the work bench, in accordance with the installation plan.

The programming flow charts in the programming section show all options available for each parameter. Factory defaults are marked with a dark box to their right, and other options (that can be selected instead) are marked by clear boxes. This method allows you to put a checkmark in the appropriate clear box whenever you deviate from the factory defaults.

Most of the programming section paragraph numbers correlate with the programming menu numbers. For example, paragraph 4.4.19 describes the "Jam detect", that exists in menu 4 (define panel), sub-menu 19 (Jam detect).

Although setting the correct time and date is one of the user tasks, we recommend that you set the time and date in the course of programming. Access to the "User Settings" for the installer is possible through item 10 on the installer's menu or through the user menu (see User's manual section 7).

After programming, proceed to install the system as detailed in the Installation Instructions, from paragraph 3.4 onward.

The installer should verify line seizure. Be aware of other phone line services such as DSL. If DSL service is present on the phone line, you must install a filter. It is suggested to use the DSL alarm filter model Z-A431PJ31X manufactured by Excelsus Technologies, or equivalent. This filter simply plugs into the RJ-31X jack and allows alarm reporting without breaking the internet connection. If the user has a Voice over IP phone system only, the control panel will not be able to communicate with the central station via the PSTN telephone line. In this case, the user will either need to install an additional telephone line, or connect a GSM module.

1. INTRODUCTION

Compatibility: *This manual refers to PowerMaxComplete v2.0.00 and above.*

The PowerMaxComplete is a user and installer-friendly, 30-zone fully-supervised wireless control system. The system is designed to function in an appealing way to the user and also offers features that make installers' life easier than ever before:

The PowerMaxComplete includes an optional partition feature. Partitioning allows you to have up to three independently controllable areas with different user codes assigned to each partition or one user code assigned to a combination of up to 3 partitions. Partitions can be armed or disarmed individually or altogether in one operation. For example, you can define the garage as partition 1, the basement as partition 2 and the house as partition 3. Since each partition is independent of other partitions, you can arm or disarm each partition as desired without altering the states of the other partitions.

EASY TO INSTALL

- Optional plug-in RS-232 module that enables connection of a local computer.

EASY TO MAINTAIN

- Status, alarm memory and trouble data are displayed upon request.
- Diagnostic test provides visual and audible indication of the signal level of each detector.
- Remote control and status verification from distant telephones.
- Event log stores and displays information.
- Upload / download from distant computer via telephone line or cellular modem.

QUICK PROGRAMMING

- Simple programming logic, fully menu driven.
- Multiple-choice selection of options for each parameter.
- Unequivocal visual prompts and audible signals.
- Installer access to the user menu.

2. SPECIFICATIONS

2.1 General Data

Zones Number: 28 wireless, 2 hardwired (zones 29 & 30).

Hardwired Zone Requirements: 2.2 kΩ E.O.L. resistance (max. resistance of wires 220 Ω).

Zone Types: Interior follower, interior, perimeter, perimeter follower, delay 1, delay 2, 24h silent, 24h audible, fire, non-alarm, emergency, gas, flood, temperature and home / delay.

User Codes: 8 codes, 4 digits each (9999 different combinations). Code 0000 is not allowed.

Control Facilities:

- Integral keypad
- PowerCode / Code-Secure™ hand-held transmitters
- Wireless commander
- SMS commands via optional GSM/GPRS module
- Remote telephone
- Local or remote computer

Display: Single line, Backlit 16-character LCD.

Arming Modes: AWAY, HOME, AWAY-INSTANT, HOME-INSTANT, LATCHKEY, FORCED, BYPASS.

Alarm inhibited during a single arming period (swinger stop) after: 1, 2, 3, alarm/tamper/fault, or not inhibited (programmable / selectable).

Alarm Types: Silent alarm, siren alarm or sounder (internal) alarm, in accordance with zone attributes.

Siren Signals: Continuous (intrusion / 24 hours / panic); triple pulse - pause - triple pulse... (fire).

Siren (bell) Timeout: Programmable (4 min. by default)

Internal Sounder Output: At least 85 dBA at 10 ft (3 m)

Supervision: Programmable time frame for inactivity alert

Special Functions:

- Speech and sound control
- Chime zones
- Diagnostic test and event log
- Local and Remote Programming over Telephone, GSM/GPRS connections
- Computer control and data download/upload
- Calling for help by using an emergency transmitter
- Tracking inactivity of elderly, physically handicapped and infirm people
- Family message center (recording and playback)
- Two-way voice communication

Data Retrieval: Status, alarm memory, trouble, event log.

Real Time Clock (RTC): The control panel keeps and displays time and date.

Compliance with U.S. Standards:

Meets CFR 47 Part 15 and Part 68 requirements.

Compliance with European CE Standards:

EN 50082-1, EN301489-3,7, EN6100-4-6, EN60950, EN300220, EN50130-4, EN50130-5, EN 50131-1, EN 50131-3 Grade 2 Class 2, ATS-3

The PowerMaxComplete is compatible with the RTTE requirements - Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999.

According to the European standard EN50131-1, the PowerMaxComplete security grading is 2 – "low to medium risk" and environmental classification is II – "indoor general" and the power supply type is A.

GSM standards:

Europe : Complies with CE standards 3GPP TS 51.010-1, EN 301 511, EN301489-7

USA: CFR 47 Part 22 (GSM850) and Part 24 (GSM 1900). UL1637, UL1635, UL1023, UL985, ULC-S545-02, ULC C1023.

EMC standard: CFR 47 Part 15.

SAR standards: FCC rule 2.1093, FCC Docket 96-326 & Supplement C to OET Bulletin 65

GPRS standards:

General: ETSI EN 301 511 v.9.0.2, CENELEC EN 60950:2001, ETSI EN 301 489-1: v.1.4.1, ETSI EN 301 489-7: v.1.2.1.

GE864 module is compliant with the following standards: EN 301 511 and 3GPP 51.010-1, EN 301 489-1, EN 301 489-7, ETSI GSM 07.07.

2.2 RF Section

Operating Frequencies (MHz): 315 (in USA & Canada), 433, 868.95 or other UHF channel per local requirement in the country of use.

Receiver Type: Super-heterodyne, fixed frequency
Receiver Range: 600 ft (180 m) in open space
Antenna Type: Spatial diversity
Coding: PowerCode and/or CodeSecure™

2.3 Electrical Data

Power Supply: Internal switching power supply 100VAC to 240VAC, 50/60 Hz, 0.5A / 12.5 VDC, 1.6A.

Current Drain: Approx. 40 mA standby, 1400 mA at full load.

Site External Siren Current (EXT): 450* mA max @ 10.5 VDC minimum when powered by AC & DC (battery).

Site Internal Siren Current (INT): 450* mA max. @ 10.5 VDC minimum when powered by AC & DC (battery)

PGM Output Current: 100* mA max.

Wired Detectors (zones 29&30) Total (Sum) Current: 36* mA max.

High Current / Short Circuit Protection: All outputs are protected (automatic reset fuse).

* Total PowerMaxComplete output current (of INT & EXT sirens, PGM output and detectors) cannot exceed 550 mA.

Backup Battery Options:

Backup period	Maximum external devices current [1]		
	1300 mAh 6 Battery Pack [2]	**1800** mAh 8-Battery Pack [3]	2200 mAh 8-Battery Pack [4]
4h	210mA	300mA	380mA
8h	90mA	160 mA	200mA
12h	45mA	90 mA	120 mA
24h	0mA	25 mA	45mA
36h	(no backup)	5mA	15mA
48h	(no backup)	(no backup)	0mA

1 Devices that are connected between 12V terminal and GND of PowerMaxComplete, that includes internal GSM and proximity reader.
2 7.2V 1300 mAh, rechargeable NiMH battery pack, p/n GP130AAH6BMX, manufactured by GP.
3 9.6V 1800 mAh, rechargeable NiMH battery pack, p/n GP180AAH8BMX, manufactured by GP.
4 9.6V 2200 mAh, rechargeable NiMH battery pack (special order).

Maximum battery recharge time: 72 hours

Battery Test: Once every 10 seconds.

2.4 Communication

Built-in Modem: 300 baud, Bell 103 protocol
Data Transfer to Local Computer: Via RS232 serial port
Report Destinations: 2 central stations, 4 private telephones.
Reporting Format Options: SIA, Pulse 4/2 1900/1400 Hz, Pulse 4/2 1800/2300 Hz, Contact ID, Scancom.
Pulse Rate: 10, 20, 33 and 40 pps - programmable
Message to Private Phones: Tone or voice
Ring Detection: The unit does not support ring detection without DC voltage present on the telephone lines.

2.5 Physical Properties

Operating Temp. Range: 14°F to 120°F (-10°C to 49°C)
Storage Temp. Range: -4°F to 140°F (-20°C to 60°C)
Humidity: 85% relative humidity, @ 30°C (86°F)
Size: 266 x 206 x 63 mm (10-7/16 x 8-18 x 2-1/2 in.)
Weight: 1.44Kg (3.2 pounds) (with battery)
Color: White

3. INSTALLATION

3.1 Unpacking the Equipment

Open the cardboard packing box and check whether all items have been included. If you find out that an item is missing, contact your vendor or dealer immediately.

3.2 Supplying Power to the Unit

Connect power to the PowerMaxComplete temporarily (see figure 3.10). Alternatively, you may power up from the backup battery, as shown in figure 3.3.

Disregard any “trouble” indications pertaining to lack of battery or lack of telephone line connection.

3.3 System Planning & Programming

It pays to plan ahead - use the tables in appendices A and B at the end of this guide to register the intended location of each detector, the holder and assignment of each transmitter.

Gather up all transmitters and detectors used in the system and mark each one in accordance with your deployment plan.

Program the system now as instructed in the programming section.

3.4 Mounting

Required tool: Philips screwdriver #2.

PowerMaxComplete mounting process is shown in figure 3.1 - 3.11.

3.5 Wiring

Required tools: Cutter and slotted screwdriver - 3 mm blade.

PowerMaxComplete wiring is shown in figure 3.2.

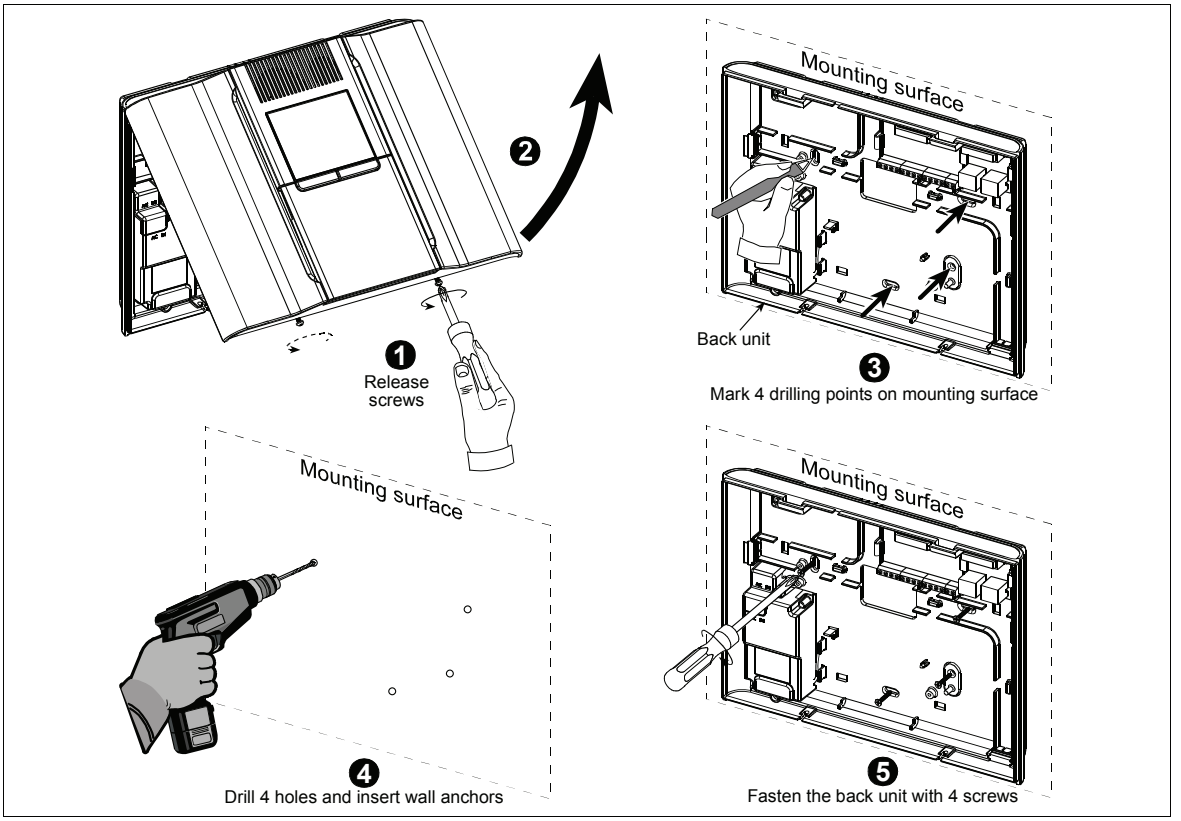
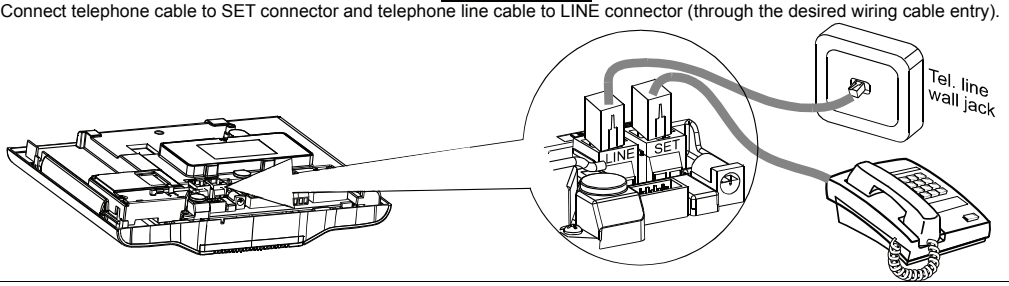


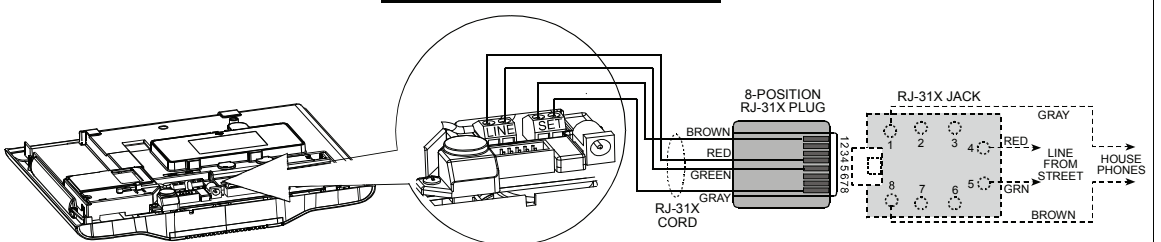
Figure 3.1 – Back Unit Mounting

PHONE WIRING

Connect telephone cable to SET connector and telephone line cable to LINE connector (through the desired wiring cable entry).

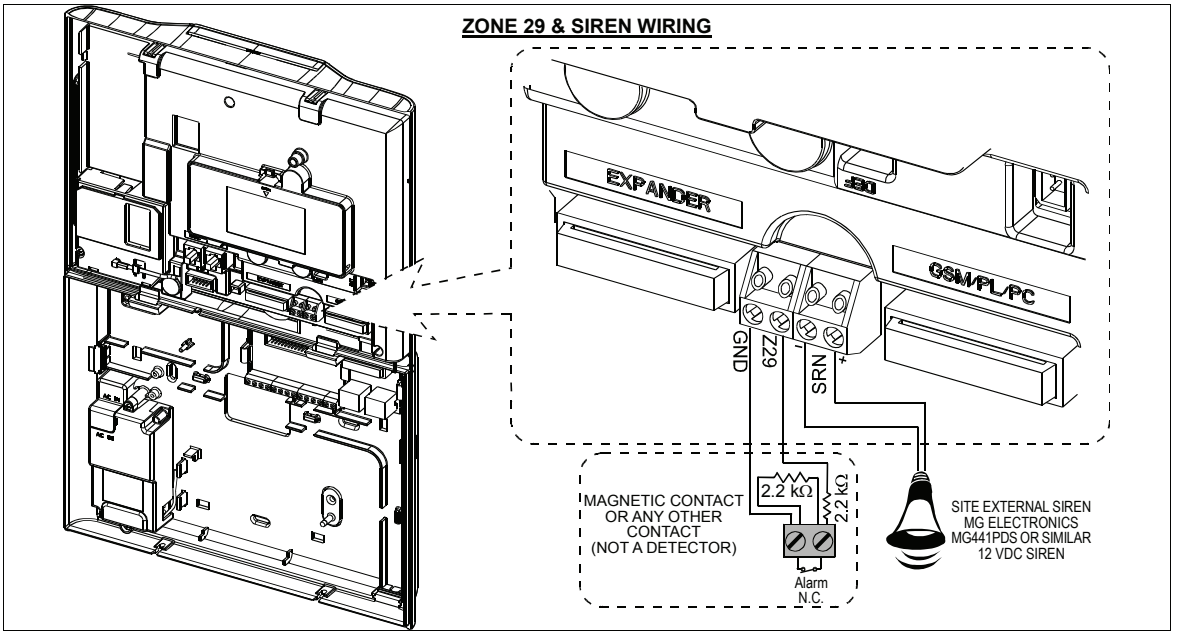


PHONE WIRING IN NORTH AMERICA



Phone wiring in the UK: Line terminals must be connected to pins 2 and 5 of the wall jack.

For all installations: If DSL service is present on the phone line, you must route the phone line through a DSL filter (refer to MESSAGE TO THE INSTALLER on page 2 for further details).



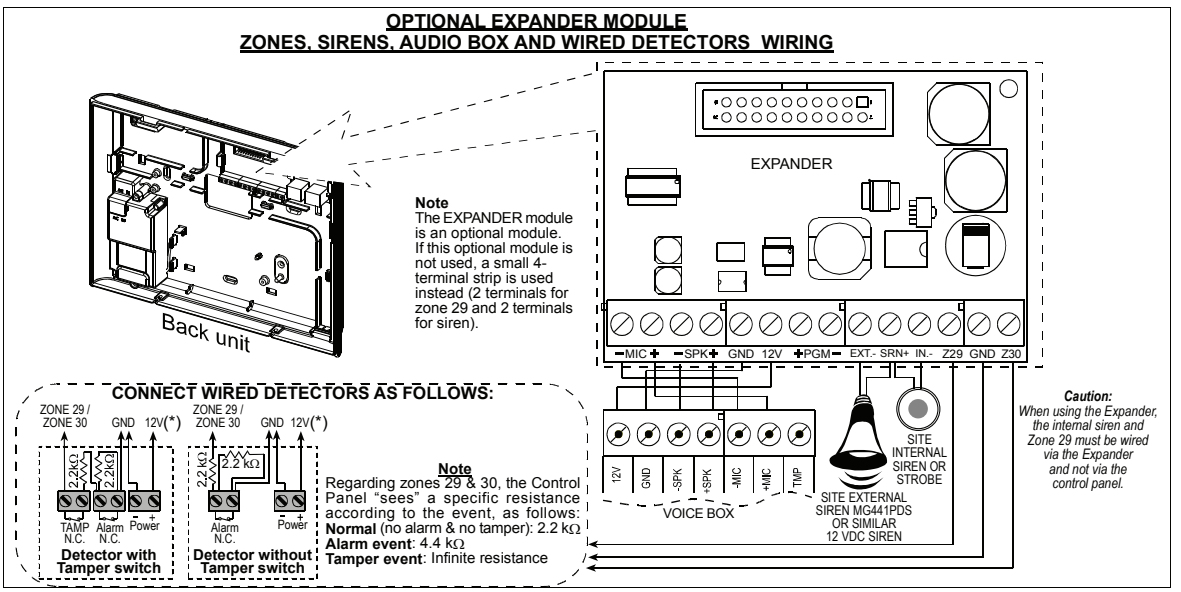

OPTIONAL EXPANDER MODULE
ZONES, SIRENS, AUDIO BOX AND WIRED DETECTORS WIRING
Back unit
Note
The EXPANDER module is an optional module. If this optional module is not used, a small 4-terminal strip is used instead (2 terminals for zone 29 and 2 terminals for siren).
EXPANDER
MIC SPK GND 12V PGM EXT- SRN+ IN- Z29 GND Z30
CONNECT WIRED DETECTORS AS FOLLOWS:
ZONE 29 / ZONE 30
GND
12V(*)
2.2KΩ
TAMP N.C.
Alarm N.C.
Power
Detector with Tamper switch
Detector without Tamper switch
Note
Regarding zones 29 & 30, the Control Panel "sees" a specific resistance according to the event, as follows:
Normal (no alarm & no tamper): 2.2 kΩ
Alarm event: 4.4 kΩ
Tamper event: Infinite resistance
12V
GND
-SPK
+SPK
-MIC
+MIC
TMP
VOICE BOX
SITE INTERNAL SIREN OR STROBE
SITE EXTERNAL SIREN MG441PDS OR SIMILAR 12 VDC SIREN
Caution:
When using the Expander, the internal siren and Zone 29 must be wired via the Expander and not via the control panel.

Figure 3.2 - Wiring

Notes for EXPANDER module wiring:

* *Zone 29/GND and Zone 30/GND terminals can be connected to a normally closed contact of a detector, switch (for example a Tamper switch of any device), or a pushbutton, via a 2.2 KΩ resistor.* ***The 12V terminal can be used to supply 12V*** *(up to 36mA) to a detector (if necessary).*

** *The EXT terminal can be used to trigger an external siren.*

The INT terminal can be programmed for an "internal siren" or "strobe" (see DEFINE OUTPUTS - DEFINE INT/STRB in par. 4.8).

The 12V and "GND" terminals can be connected to a siren (for constant DC power supply).

WARNING! *When plugging terminals back into place, be sure to align them carefully with the pins on the PCB. Misaligned or reverse insertion of terminals may damage internal PowerMaxComplete circuits!*

IMPORTANT! *The terminals for internal and external sirens are DC outputs intended for 12V sirens. Connecting a loudspeaker to any of these outputs will cause a short circuit and will damage the unit.*

Notes for UL installations

a. *The sirens connected to the sites INTERNAL or EXTERNAL SIREN in the EXPANDER must be suitable for burglar alarm applications. If UL fire installation is required, all installed accessories must comply with UL fire standards. Any external siren used, must be UL listed and shall be rated to operate under the voltage specified in the Specifications.*
   Note: *The siren on the control panel PCB is non-UL compliant.*
b. *A device that is connected to PGM terminal should not exceed the current consumption defined for the 24-hour backup period listed in the Backup Battery Options table (see section 2.3).*
c. *The system shall be installed in accordance with Chapter 2 of the National Fire Alarm Code, ANSI/NFPA 70.*
d. *All wiring should be acceptable for class 1 systems as defined by the National Electrical Code, ANSI/NFPA 70. No. 26 AWG or larger telecommunication line cord shall be used.*
e. *The system shall be installed in accordance with CSA C22.1 Canadian Electrical Code, Part 1.*
f. *A minimum spacing of 1/4 inch shall be maintained between the telephone wiring and the low voltage wiring (zones, bell circuit, etc). Do not route the LINE and SET wires in the same wiring channel with other wires.*

3.6 Backup Battery Insertion

Open battery compartment cover (see drawing below). Insert one 6-battery pack or 8-battery pack and connect its connector as shown below.

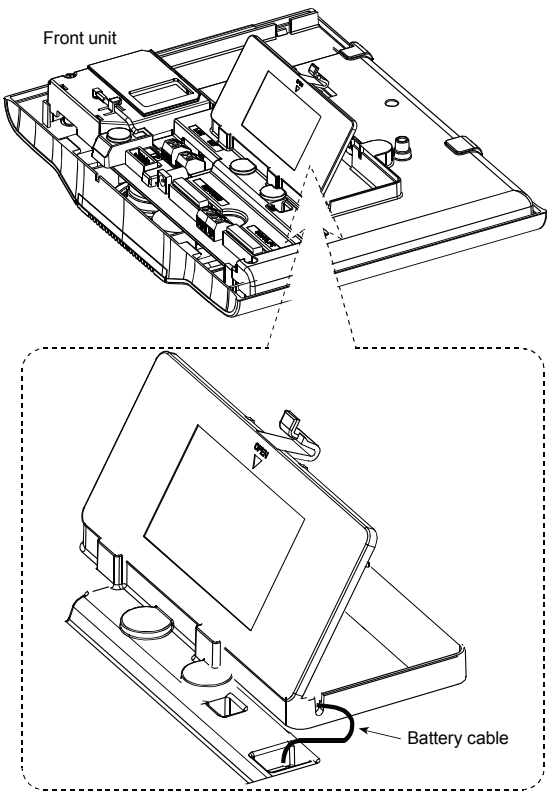


Figure 3.3 - Battery Insertion

3.7 Optional GSM/GPRS Module Mounting

Note: *The GSM module is used with an internal antenna.*
Caution: *Do not install or remove the GSM module when the system is powered by AC power or backup battery.*
Plug in the GSM Module and fasten it with the screw:

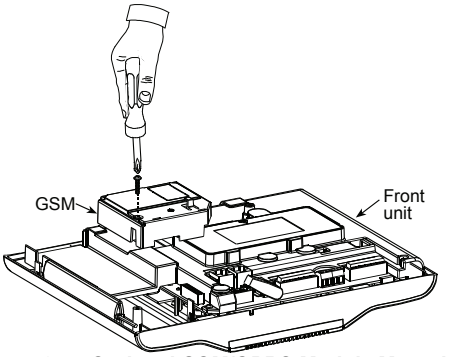


Figure 3.4 - Optional GSM/GPRS Module Mounting

Insert the SIM card into the GSM module:

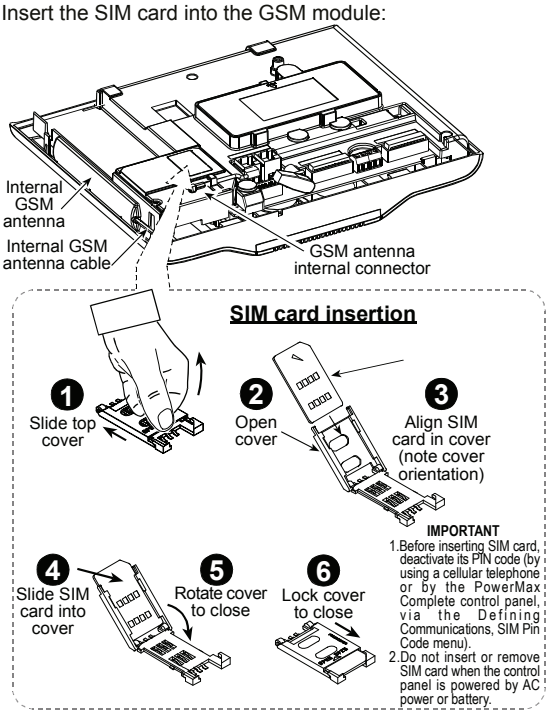

Internal GSM antenna
Internal GSM antenna cable
GSM antenna internal connector
SIM card insertion
1
Slide top cover
2
Open cover
3
Align SIM card in cover (note cover orientation)
4
Slide SIM card into cover
5
Rotate cover to close
6
Lock cover to close
IMPORTANT
1.Before inserting SIM card, deactivate its PIN code (by using a cellular telephone or by the PowerMax Complete control panel, via the Defining Communications, SIM Pin Code menu).
2.Do not insert or remove SIM card when the control panel is powered by AC power or battery.

Figure 3.5 - SIM Card insertion

For internal antenna only: Remove the paper strip from the antenna sticker and stick the antenna on the control panel. Connect the antenna to the control panel GSM antenna connector

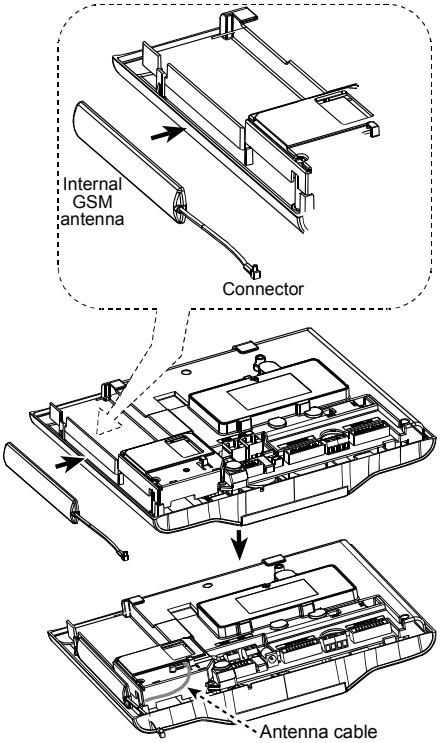


Figure 3.6 - GSM Internal Antenna Mounting

3.8 DUAL RS-232 Optional Module Mounting

The DUAL RS-232 is a Module that enables connection of any two simultaneous devices, such as Local PC programming or GSM Module.

The internal GSM unit enables the PowerMaxComplete system to operate over a cellular network (for details regarding the GSM modem features and connections, refer to the GSM Modem installation instructions).

To install the DUAL RS-232 module into the control panel, press it into the marked location (see drawing below) until a click is heard.

Connect a local PC or GSM module, to one of the DUAL RS-232 module connectors, as shown below.

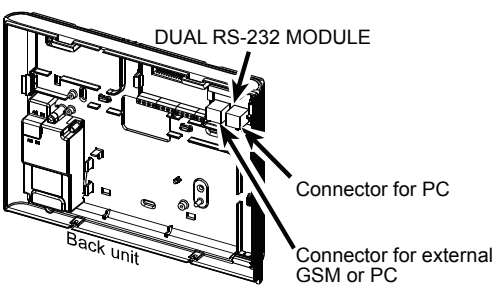


Figure 3.8 – DUAL RS-232 Module Mounting

3.9 Optional Expander Module Mounting

The EXPANDER module enables connection of speech box, site external siren, site internal siren or strobe and connection of wired detector to zone number 29 and 30.

The EXPANDER module also enables connection of a desired device to PGM (programmable) output that is activated according to predefined conditions.

Mount the Expander module as shown below.

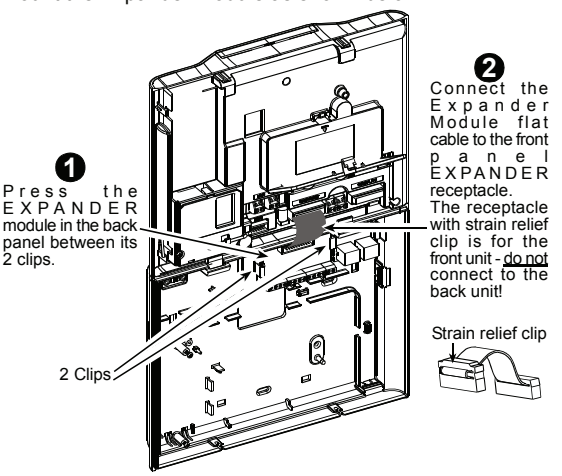

1
Press the EXPANDER module in the back panel between its 2 clips.
2
Connect the Expander Module flat cable to the front panel EXPANDER receptacle.
The receptacle with strain relief clip is for the front unit - do not connect to the back unit!
2 Clips
Strain relief clip

Figure 3.9 – EXPANDER Module Mounting

3.10 Power Cable Connection

Connect the power cable and close the control panel as shown in figure 3.10.

Socket-outlet shall be installed near the equipment and shall be easily accessible.

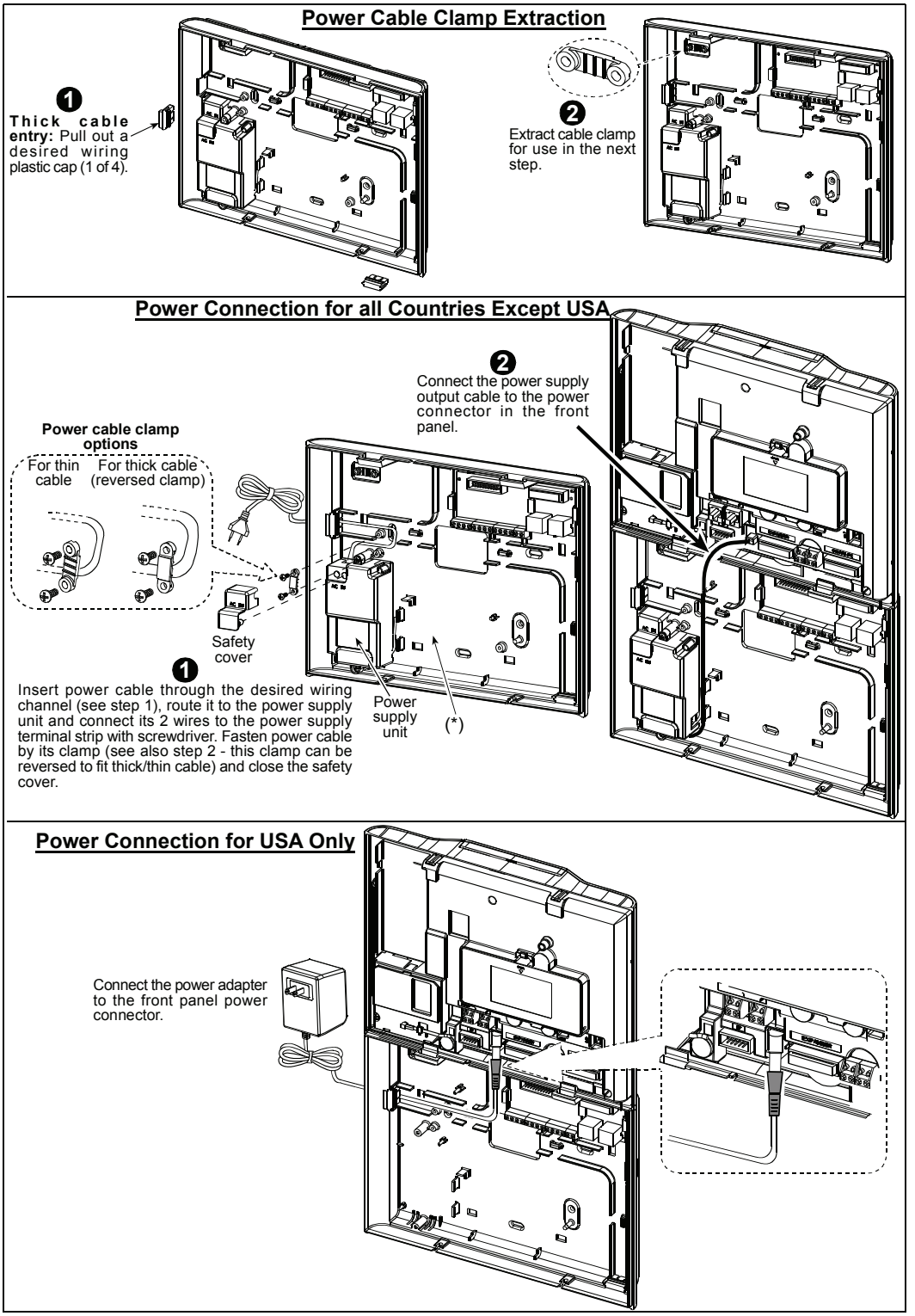

Power Cable Clamp Extraction
1
Thick cable entry: Pull out a desired wiring plastic cap (1 of 4).
2
Extract cable clamp for use in the next step.
Power Connection for all Countries Except USA
2
Connect the power supply output cable to the power connector in the front panel.
Power cable clamp options
For thin cable
For thick cable (reversed clamp)
Safety cover
1
Insert power cable through the desired wiring channel (see step 1), route it to the power supply unit and connect its 2 wires to the power supply terminal strip with screwdriver. Fasten power cable by its clamp (see also step 2 - this clamp can be reversed to fit thick/thin cable) and close the safety cover.
Power supply unit
(*)
Power Connection for USA Only
Connect the power adapter to the front panel power connector.

Figure 3.10 - Power Cable Connection

* Do not route wiring in this area, to enable proper closure of the control panel.

3.11 Control Panel Final Closure

Control panel final closure is shown below.

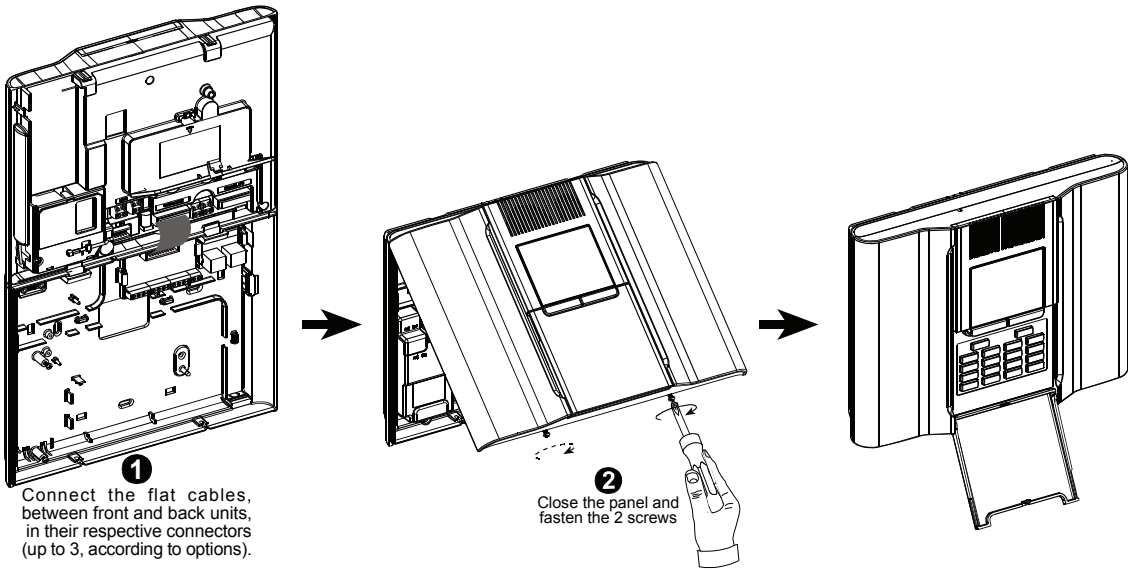

1
Connect the flat cables, between front and back units, in their respective connectors (up to 3, according to options).
2
Close the panel and fasten the 2 screws

Figure 3.11 - Final Closure

4. PROGRAMMING

4.1 INTRODUCTION

The system is programmed via menus and sub-menus which are entered through the Installer Mode and can be selected using the ▶▶ and i OK keys.

Your system is equipped with an integrated Partition Mode that can divide your alarm system into as many as three distinct areas called partitions. If Partition Mode is enabled additional menus become available and several system features such as the LCD display behave differently. For further details on Partition Mode see Appendix A.

4.1.1 General Guidance

We recommend to program the PowerMaxComplete on the work bench before actual installation. Operating power may be obtained from the backup battery or from the AC power supply.

The installer's menu is accessible only to those who know the installer's 4-digit code, which is **9999** by factory default.

Note: *Access to the installer menu, in PowerMaxComplete that has "User Permission" enabled (for example in UK) is accessible only at the end of the user menu. This option can be changed if necessary (see par. 4.4.36).*

For PowerMaxComplete that has 2 installer codes, the default MASTER INSTALLER code is **9999** and the default INSTALLER code is **8888**.

The following actions can be done only by using the master installer code:

- Changing master installer code.
- Resetting the PowerMaxComplete parameters to the default parameters,
- Defining specific communication parameters, as detailed in a note in figure 4.5.

Obviously, you are expected to use this code only once for gaining initial access, and replace it with a secret code known only to yourself.

You will mainly use 5 control pushbuttons during the entire programming process:

▶▶	- to move one step forward in a menu.
◀	- to move one step backward in a menu.
i OK	- to enter the relevant menu or confirm data.
↑	- to move one level up in a menu.
🔓	- to return to the "OK TO EXIT" state.

The sounds you will hear while programming are:

♩	**- Single beep, heard whenever a key is pressed.**
♩♩	**- Double beep, indicates automatic return to the normal operating mode (by timeout).**
☺	- **Happy Melody** (- - - ——), indicates successful completion of an operation.
☹	- **Sad Melody** (———), indicates a wrong move or rejection.

4.1.2 Entering an Invalid Installer Code

If you enter an invalid installer code 5 times, the keypad will be automatically disabled for 90 seconds and the message WRONG PASSWORD will be displayed.

4.1.3 Installer's Menu

The installer's menu is shown in figure 4.1a. The text in rectangles represents the current PowerMaxComplete display.

4.1.4 Setting a New Installer Code

To set an installer code, perform the actions that are presented in figure 4.1b. When you are instructed to enter code, enter a 4-digit code.

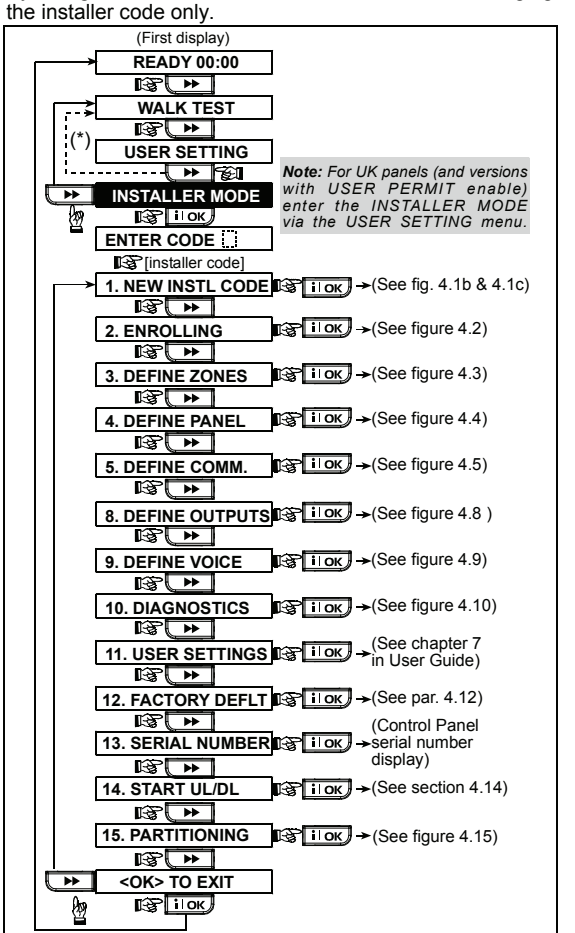
4.1.5 Setting a New Installer Code in PowerMaxComplete that has 2 Installer Codes

For PowerMaxComplete with 2 installer codes, MASTER INSTALLER code (default 9999) and INSTALLER code (default 8888), set new codes as shown in figure 4.1c.

For details regarding the different authorization levels when logging in with installer code and master installer code, refer to the note inside figure 4.5 (DEFINE COMM).

By using the master installer code, the menu enables changing both master installer code and installer code.

By using the installer code, the menu enables changing the installer code only.


(First display)
READY 00:00
WALK TEST
(*)
USER SETTING
INSTALLER MODE
ENTER CODE
[installer code]
Note: For UK panels (and versions with USER PERMIT enable) enter the INSTALLER MODE via the USER SETTING menu.
1. NEW INSTL CODE →(See fig. 4.1b & 4.1c)
2. ENROLLING →(See figure 4.2)
3. DEFINE ZONES →(See figure 4.3)
4. DEFINE PANEL →(See figure 4.4)
5. DEFINE COMM. →(See figure 4.5)
8. DEFINE OUTPUTS →(See figure 4.8)
9. DEFINE VOICE →(See figure 4.9)
10. DIAGNOSTICS →(See figure 4.10)
11. USER SETTINGS →(See chapter 7 in User Guide)
12. FACTORY DEFLT →(See par. 4.12)
13. SERIAL NUMBER →(Control Panel serial number display)
14. START UL/DL →(See section 4.14)
15. PARTITIONING →(See figure 4.15)
<OK> TO EXIT

(*) Applicable only when "USER PERMIT" function is enabled (see par. 4.4.36 - USER PERMIT)

Figure 4.1a - Installer's Menu

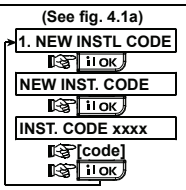


Figure 4.1b - Setting a New Installer Code *(see note)*

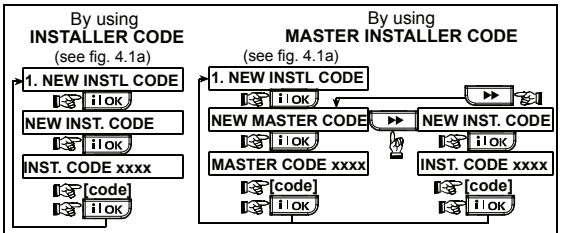


Figure 4.1c - Setting a New Installer Code in System with Inst. & Master Inst. Codes *(see note)*

Note: ***Installer*** *Code should never be programmed as "0000". Doing so will lock the user out of the installer menu!*

4.2 ENROLLING WIRELESS DEVICES AND KEYFOB TRANSMITTERS

4.2.1 General Guidance

The ENROLLING mode has the following sub-modes:

- ENROLLING TYPE (wireless devices)
- ENROLL SENSORS.
  ENROLL KEYFOB (multi-button CodeSecure transmitters)
- ENROLL WL 1WAY KP (wireless commander MCM-140+)
- ENROLL WL 2WAY KP (wireless 2-way keypad MKP-150/ MKP-151)

  Note: *This sub-mode will be hidden if Partition is enabled.*
- ENROLL WL SIREN (wireless siren)
- ENROLL PROX TAG (proximity tag)

Before beginning, gather all the devices that you intend to enroll and make sure they all have batteries installed.
Your control panel must recognize the unique identification code (ID) of each such device in order to supervise them, receive their signals and respond accordingly.

Attention! *CodeSecure transmitters are mainly used for arming/disarming and can not be enrolled to zones.* ***In order to enroll to zones, use only non-CodeSecure wireless devices.***

4.2.2 Enrolling Type

Here you determine whether to enroll a wireless device by normal transmission or by device Tamper function (opening its cover). Options: **normal,** or **by tamper**.

4.2.3 Enroll/Delete Sensors

For PowerMaxComplete without expander module: Magnetic contact or any other contact (not a detector) can be enrolled in zone 29 and wireless detectors can be enrolled in zones 01-28.
For PowerMaxComplete with expander module: Wired detectors can be enrolled in zones 29&30 and wireless detectors can be enrolled in zones 01-28.
Note: *Wired zones need to be enrolled in the ENROLLING menu before they are active.*

STOP

- *Before enrolling, the lens at the front of PIR and dual-technology sensors should be masked to prevent inadvertent transmission.*
- *Make sure that magnetic contact transmitters are together with their magnets, to prevent them from sending alarm transmissions.*

To enroll / delete wired / wireless sensors, refer to Fig. 4.2.

4.2.4 Enroll/Delete Keyfob Transmitters

Keyfob transmitters are multi-button wireless CodeSecure™ transmitters. Eight system users use them for better, quicker and safer control over various system functions.
To enroll / delete 1-way or 2-way keyfob transmitters, refer to figure 4.2.

4.2.5 Enroll/Delete Wireless Commander

The Wireless Commander (MCM-140+) is a remote control unit that enables the user to remotely control the system. To enroll / delete up to 8 wireless commanders, refer to figure 4.2 (Enroll WL 1-way KP).

4.2.6 Enroll/Delete 2-Way Keypad

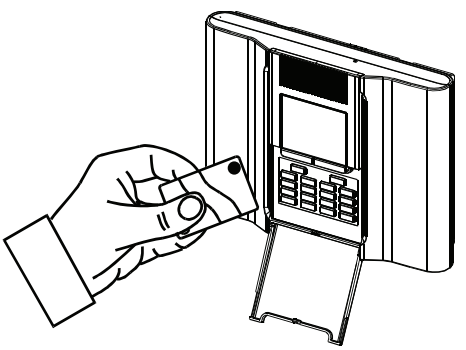
The 2-way keypad, type MKP-150/MKP-151, enables the user to remotely control the system and also to receive data from the system (status, alarm and trouble data). To enroll up to two 2-way keypads, refer to figure 4.2.
Note: *MKP-150/151 is not compatible for use when partition is enabled.*

4.2.7 Enroll/Delete Wireless Siren

The wireless siren is a remote siren that is activated upon predefined events by the PowerMaxComplete system. To enroll / delete up to 2 wireless sirens, refer to figure 4.2.

4.2.8 Enroll/Delete Proximity Tags

Proximity tags enable authorized people to enter restricted areas. Presenting valid proximity tag, while the system is armed, causes the system to disarm. Presenting valid proximity tag, while the system is disarmed, causes the system to be armed in AWAY (optional HOME) mode. To enroll / delete proximity tags, refer to figure 4.2.
Note: *Proximity tags are used on control panels with installed Proximity readers (not standard on UK versions). Proximity tags are not compatible for use when partition is enabled.*



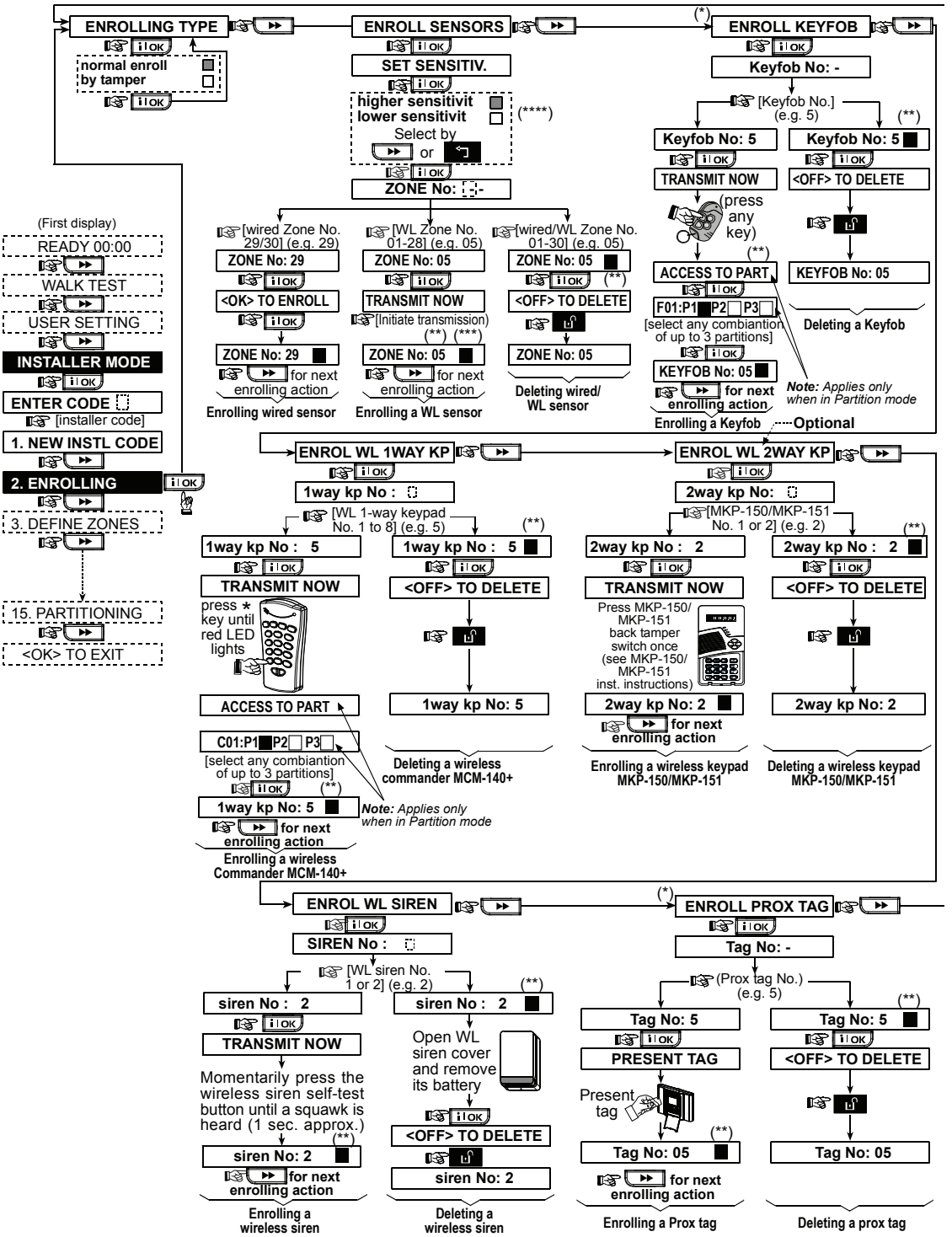


Figure 4.2 - Enrolling / Deleting Wireless Devices / Keyfobs / Wireless Commanders / Wireless Sirens

* Keyfob & proximity tags enrolling can be performed by the installer or by the user (via USER SETTINGS menu).

** A black box in the display means that a device is enrolled (the system has learned its ID). No black box indicates that the device is not enrolled.

*** Initiate either normal transmission or the device tamper function (see ENROLLING TYPE, Par. 4.2.2).

**** Select "higher" sensitivity for far wireless device, "lower" for near devices.

Note: *This changes the RF range during enrolling only and does not affect the performance of the sensor.*

4.3 DEFINING ZONE TYPES, NAMES, CHIME ZONES & PARTITION

This mode allows you to assign one of 15 zone types to each of the system's 30 (wireless & wired) zones. You can define zones as KEY ZONES, to enable arming/disarming of the system by PowerCode transmitters (see Appendix E9) In addition, it also allows you to assign a name and partition number (up to three in a PowerMaxComplete Partition system) to each zone and determine whether the zone will operate as a chime zone (only while the system is in the disarmed or Home arming state). When a chime zone is triggered, chime melody or zone name is heard (there are 3 selectable chime modes - Melody chime, Zone Name Chime or Chime Off).

A list of factory defaults is printed in table 1. You may fill out the blank columns even before you start and proceed to program according to your own list.

Remember!

A delay zone is also a perimeter zone by definition.

Zone types are fully explained in Appendix E.

Note: *Custom Zone Name text can be changed through the DEFINE VOICE menu.*

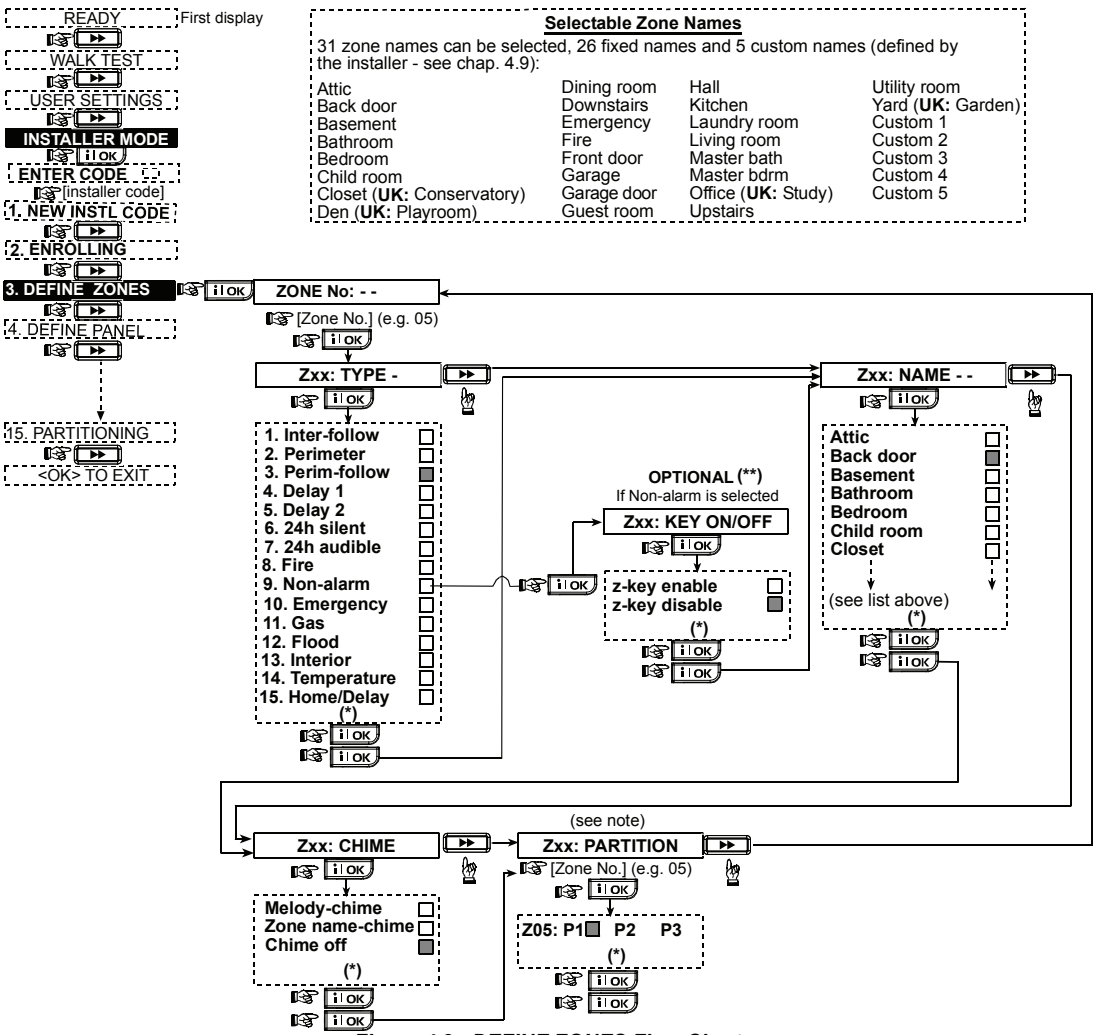


Figure 4.3 - DEFINE ZONES Flow Chart

* The currently saved option is displayed with a dark box at the right side. To review the options, repeatedly click ▶▶ or ↰ button, until the desired option is displayed, then click OK (a dark box will be displayed at the right side).

** Key ON/OFF is an optional function that enables you to arm or disarm the system via zones 21-28, 29 or 21-29, provided that "non-alarm" was pre-defined for these zones.

Table 1 - DEFAULT AND PROGRAMMED ZONE DEFINITIONS

Zone No.	Zone Type		Zone Name		Chime (melody Zone Name or Off) (*)	Partition
	Default	Programmed	Default	Programmed		
1	Delay 1		Front Door			
2	Delay 1		Garage			
3	Delay 2		Garage Door			
4	Perimeter		Back Door			
5	Perimeter		Child Room			
6	Interior		Office			
7	Interior		Dining Room			
8	Perimeter		Dining Room			
9	Perimeter		Kitchen			
10	Perimeter		Living Room			
11	Interior		Living Room			
12	Interior		Bedroom			
13	Perimeter		Bedroom			
14	Perimeter		Guest Room			
15	Interior		Master Bedroom			
16	Perimeter		Master Bedroom			
17	Perimeter		Laundry Room			
18	Perimeter		Master Bathroom			
19	Perimeter		Basement			
20	Fire		Fire			
21	Fire		Fire			
22	Emergency		Emergency			
23	Emergency		Emergency			
24	24 h / silent		Basement			
25	24 h / silent		Office			
26	24 h / audible		Attic			
27	24 h / audible		Den			
28	non-alarm		Yard			
29	non-alarm		Hall			
30	non-alarm		Utility room			

** **Note:** All zones are Chime-off by default. Enter your own choice in the last column and program accordingly.*

4.4 DEFINING CONTROL PANEL PARAMETERS

4.4.1 Preliminary Guidance

This mode allows you to customize the control panel and adapt its characteristics and behavior to the requirements of the particular user. An illustrated process is shown in figure 4.4. In this illustration, each selected option is displayed with a dark box at the right side. To review the options, repeatedly click ▶▶ or ↰ button, until the desired option is displayed, then click SHOW/OK button.

4.4.2 Entry Delays 1&2

(Fig. 4.4, location 01, 02). Two different entry delays allow the user to enter the protected site (while the system is in the armed state) via 2 specific doors and routes without causing an alarm.

Following entry, the user must disarm the control panel before the entry delay expires. Slow-rate warning beeps start sounding once the door is opened, until the last 10 seconds of the delay, during which the beeping rate increases. Locations No. 1 (entry delay 1) and 2 (entry delay 2) allow you to program the length of these delays. Available options for each delay are: **00s**, **15s**, **30s**, **45s**, **60s** , **3m** and **4m**.

***Note:** For UL installation entry delay should be up to 45 sec.*

4.4.3 Exit Delay

(Fig. 4.4 location 03). An exit delay allows the user to arm the system and leave the protected site via specific routes and doors without causing an alarm. Slow-rate warning beeps start sounding once the arming command has been given, until the last 10 seconds of the delay, during which the beeping rate increases. Location No. 3 allows programming of the exit delay length. Available options are: **30s**, **60s**, **90s**, **120s**, **3m, 4m**.

***Note:** For UL installation exit delay should be up to 120 sec.*

4.4.4 Bell Time

(Fig. 4.4, location 04). Here you select the length of time the bell (or siren) is allowed to function upon alarm. The bell time starts upon activation of the siren. Once the bell time expires, the siren is automatically shut down.

Available options are: **1**, **3**, **4**, **8**, **10**, **15** and **20** minutes.

***Note:** Bell Time is defined for the entire alarm system and not per partition.*

4.4.5 Abort Time

(Fig. 4.4 location 05). Here you select the length of time allowed by the system to abort an alarm (not applicable to alarms from FIRE, 24H SILENT, EMERGENCY, GAS FLOOD and TEMPERATURE zones). The PowerMaxComplete is programmed to provide an “abort interval” that starts upon detection of an event. During this interval, the buzzer sounds a warning but the siren remains inactive and the alarm is not reported. If the user disarms the system within the allowed abort interval, the alarm is aborted.

Available options are: **00s**, **15s**, **30s**, **45s**, **60s**, **2m, 3m**, **4m**.

4.4.6 Alarm Cancel

(Fig. 4.4, location 06). Here you determine the ”cancel alarm” period that starts upon reporting an alarm to the central station. If the user disarms the system within that time period, a “cancel alarm” message is sent to the central station.

Available options are: **1**, **5**, **15**, **60 minutes**, **4 hours** and also **cancel inactive**.

4.4.7 Quick Arm

(Fig. 4.4, location 07). Here you determine whether the user will be allowed to perform quick arming or not. Once quick arming is permitted, the control panel does not request a user code before it arms the system.

The two options are: **quick arm ON** and **quick arm OFF**.

4.4.8 Bypass

(Fig. 4.4, location 08)

Here you permit either manual bypassing of individual zones (through the USER SETTINGS menu), or allow the system to "force arm" (perform automatic bypassing) of open zones during the exit delay. If desired, press the arming key twice if you want to eliminate the delay beeps that continue during a force arming. If a zone is open and forced arming is not permitted, “NOT READY” is displayed and the system does not arm (the “Sad Melody” will sound). If "no bypass" is selected, neither manual bypassing nor force arming is allowed.

Options: **manual bypass**, **force arm** and **no bypass**.

Note: *Force arm is not applicable in the UK.*

4.4.9 Exit Mode

(Fig. 4.4, location 09). Here you determine whether the exit delay will restart if the exit / entry door is reopened before the exit delay expires. Restarting the exit delay is helpful if the user re-enters immediately after going out to retrieve an item that he left behind. Three types of exit mode are available:

Restart Exit - Exit delay restarts when the door is reopened during exit delay. The restart occurs once only.

Off by door - When the door is closed, the exit delay is automatically terminated (even if the defined exit delay was not completed).

Normal - The exit delay is exactly as defined, regardless of whether the door is open or closed.

4.4.10 Piezo Beeps

Fig. 4.4, location 10). Here you determine whether warning beeps will sound or muted during exit and entry delays. An additional option is to mute the warning beeps only when the system is armed “HOME”.

Options (Partition disabled): **enable beeps**, **off when home** and **disable beeps**.

Options (Partition enabled): ■ (enable beeps), **H** (off when home) and □ (disable beeps). The pushbuttons 1, 2, and 3 provide selection of the corresponding partitions. Pressing each button repeatedly will toggle between each option.

Note: *When exit beeps are disabled toward the end of a delay, the happy (success) melody will sound.*

4.4.11 Trouble Beeps

(Fig. 4.4, location 11). Under trouble conditions, the sounder emits a series of 3 short beeps once per minute. Here you determine whether this special beeping sequence will be active, inactive, or just inactive at night (the range of “night” hours is defined in the factory). The 3 options are: **enable beeps**, **off at night (8 PM through 7 AM)** and **disable beeps**.

4.4.12 Panic Alarm

(Fig. 4.4, location 12). Here you determine whether the user will be allowed to initiate a panic alarm by simultaneous pressing either the two panic buttons (on the keypad / wireless commander) or away + home (on a keyfob transmitter). Audible panic activates the siren and simultaneously transmits a message via telephone. Silent panic only transmits a message via telephone. The options are: **silent panic, audible panic** and **disable panic**.

4.4.13 Swinger Stop

(Fig. 4.4, location 13). Here you determine how many times each zone is allowed to initiate an alarm within a single arming period (including tamper & power failure events of detectors, PowerMaxComplete and wireless siren). If the alarms number from a specific zone exceeds the programmed number, the control panel automatically bypasses the zone to prevent recurrent siren noise and nuisance reporting to the central station. The zone will be reactivated upon disarming, or 48 hours after having been bypassed (if the system remains armed).

Available options are: **shut after 1**, **shut after 2**, **shut after 3** and **no shutdown**.

Note: *Swinger Stop is defined for the entire alarm system and not per partition*.

4.4.14 Cross Zoning

(Fig. 4.4, location 14). Here you determine whether cross zoning will be active or inactive. Cross zoning is a method used to counteract false alarms - an alarm will not be initiated unless two adjacent zones are violated within a 30-second time limit.

This feature is active only when arming AWAY and only with zone couples from zone No. 18 to 27 (18 and 19, 20 and 21, etc.). You may use any one of these zone couples to create a “cross-zoned” area.

Note: *If one of two crossed zones is bypassed (see Para. 4.4.8), the remaining zone will function independently.*

Note: *Every 2 crossed zones must be of the allowed zone type (Interior, Perimeter, Perimeter follower).*

The options are: **cross zone ON** and **cross zone OFF**.

Note: *A common zone should not be defined as a cross zone.*

Cross zoning is not applicable in Entry/ Exit zones and 24h zones (Fire, Emergency, 24h audible, 24h silent).

4.4.15 Supervision

(Fig. 4.4, location 15). Here you determine the time limit for reception of supervision reports from various supervised wireless devices. If any device does not report at least once within the selected time limit, an “INACTIVITY” alert is initiated. The options are: **1**, **2**, **4**, **8**, **12 hours** and **disable**.

4.4.16 NOT READY

(Fig. 4.4, location 16). Here you determine if the system will be NOT READY status when there is a supervision failure. In the "in supervision" mode, the system will be in NOT READY status if during the last 20 minutes a supervision message was not received. Options: **normal** and **in supervision**.

4.4.17 AUX Button A

(Fig. 4.4, location 17). Here you select the function of the AUX button on keyfob transmitters MCT-234, MCT-237 and wireless commanders MCM-140+. Four options are offered for each AUX button:

Status (applicable only to control panel that includes voice option)**:** Pressing the AUX button will cause the control panel’s voice module to announce the system status.

Instant: Pressing the AUX button while the exit delay is in progress will cause the system to arm “instant” (the entry delay is canceled).

Skip exit delay: Pressing the AUX button will immediately cause the system to arm immediately.

PGM: Pressing the AUX button will activate the PGM output (see further programming under "DEFINE OUTPUTS", par. 4.8).

4.4.18 AUX Button B 2-W-KF

(Fig. 4.4, loc. 18). Applicable only for 2-way keyfob MCT-237. Same as 4.4.17 but for AUX button B.

4.4.19 Jam Detect

(Fig. 4.4, location 19). Here you determine whether jamming (interfering trans- missions, on the radio channel used by the system) will be detected and reported or not.
If a jam detection option is selected, the system does not allow arming under the relevant jamming conditions.

Jam Detection Options

Option	Detection and Reporting when
UL (20/20) (USA standard)	There is continuous 20 seconds of jamming
EN (30/60) (Europe standard)	There is an accumulated 30 seconds of jamming within 60 sec.
class 6 (30/60) (British standard)	Like EN (30/60) but the event will be reported only if the jamming duration exceeds 5 minutes.
Disabled	(no jamming detection and reporting).

4.4.20 Latchkey

(Fig. 4.4, location 20). Here you determine whether the system can be armed in the latchkey mode. If the system is armed this way, a "latchkey" message will be sent to specific telephones upon disarming by a "latchkey user" (users 5-8 or keyfob transmitters 5-8). This mode is useful when parents at work want to be informed of a child's return from school. You can record a name for latchkey users.
The options are: **Latchkey ON** and **Latchkey OFF**.

4.4.21 "Not Active"

(Fig. 4.4, location 21). Here you determine the time limit for reception of signals from sensors used to monitor the activity of sick, elderly or disabled people. If no device detects and reports movement at least once within the defined time limit, a "not-active" alert is initiated.
Options: **3**, **6**, **12**, **24**, **48**, **72 hours** and **no act disable**.
Note: *The Not Active timer is defined for the entire alarm system for the above hour options and not per partition (in a PowerMaxComplete Partition system). Subsequently, a dedicated timer is assigned to each partition*.

4.4.22 Back Light

(Fig. 4.4, location 22). Here you determine whether the keypad back lighting will remain on at all times or will come on when a key is pressed and go off within 10 seconds if no further keystrokes are sensed.
The two options are: **always on** and **off after 10 s**.

4.4.23 Duress

(Fig. 4.4, loc. 23)
A duress alarm (ambush) message can be sent to the central station if the user is forced to disarm the system under violence or menace. To initiate a duress message, the user must disarm the system with the duress code (2580 by default). Here you can change the code digits or enter "0000" to disable the duress feature. **The system does not allow the user to program the duress code saved in this memory location as an existing user code.**

4.4.24 Piezo Siren

(Fig. 4.4, location 24). Here you determine whether the internal siren will sound or remain silent upon alarm (according to the user preference). Options: **piezo siren on**, **piezo siren off**.

4.4.25 Reset Option

(Fig. 4.4, location 25) **(Not applicable in the USA)**
Here you determine whether the system can be rearmed (after an event) by the user or only by the installer.
Options: **user reset**, **engineer reset** or **anti code reset**.
If Engineer Reset is selected, the system can be rearmed only by the installer; by entering and exiting the installer menu, by entering and exiting the event log (see section 7), or by remote telephone. To perform Engineer Reset via the telephone, establish communication with the PowerMaxComplete (see user guide, Remote Control by Telephone, steps 1-5) and continue as follows:
a. ☞ [*], [installer code], [#]
b. Wait for 2 beeps
c. ☞ [*], [1], [#]
d. ☞ [*], [99], [#]
Visonic uses Technistore anti code reset. Installers should check with their central station for a code version (seed code) which needs to be entered in menu 4.4.35.
Note: *This menu is not available when partition is enabled.*

4.4.26 Tamper Option

(Fig. 4.4, location 26). Here you determine whether zone tamper will be reported or ignored. Available options are: **zone tamper ON** and **zone tamper OFF**.

4.4.27 Siren On Line

(Fig. 4.4, location 27). Here you determine whether the siren will be activated or not when the telephone line fails during system armed state. Available options are: **enable on fail**, **disable on fail**.

4.4.28 Memory Prompt

(Fig. 4.4, location 28). Here you determine whether the user will receive indication that an alarm has been activated.
Available options are: **enable** and **disable**.

4.4.29 Disarm Option

(Fig. 4.4, location 29) **(Not applicable in the USA)**
Here you determine when it is possible to disarm the system:
A. Any time.
B. In AWAY mode, during entry delay, by using the PowerMaxComplete keypad or wireless device (keyfob).
C. In AWAY mode, during entry delay, by using a wireless device (keyfob) only (this is set as a default in UK to comply with DD423).
D. During entry delay, or by using the PowerMaxComplete keypad in AWAY mode.
Options: **any time**, **on entry all**, **on entry wireless**, or **entry + away kp**.

4.4.30 Bell/Rep. Option

(Fig. 4.4, location 30). Here you determine whether an alarm will be initiated (siren / report) when there is a supervision / jamming failure during AWAY arming state.
Available options are: **EN standard** and **other**. When "EN standard" is selected, if there is supervision / jamming failure during AWAY arming, the siren is activated and the events are reported as tamper events. When "Other" is selected, there is no such activity during AWAY arming.

4.4.31 Low-Bat Ack

(Fig. 4.4, location 31). Here you determine whether the user will hear or will not hear low battery sound when he tries to disarm the system with a keyfob whose battery voltage is low.

Available options are: **keyfob L-B on** (the user has to acknowledge the keyfob low battery message) or **keyfob L-B off** (the user does not have to acknowledge the keyfob low battery message).

4.4.32 Screen Saver

(Fig. 4.4, location 32). Here you can determine that if no key is pressed during more than 30 seconds the display will read "PowerMax" (to prevent a possible intruder of knowing the system status). You can determine that normal display will return after pressing the button followed by entering user code (**Refresh by Code/Text by Code**) or after pressing any key (**Refresh by Key/Text by Key**). When partition is enabled, you can also determine that if no key is pressed during more than 30 seconds the date and time will appear on the display. You can determine that normal display will return after pressing the button followed by entering user code (**Clock by Code**) or after pressing any key (**Clock by Key**).

If **Refresh by Key/Text by Key** is selected, the first pressing of any key (except Fire and Emergency) will cause normal display return and the second press will perform the key function. Regarding the Fire and Emergency keys, the first key press will cause normal display return and also will perform the Fire/Emergency function.

Options (Partition Disabled): **scrn saver OFF**, **refresh by code**, **refresh by key**.

Options (Partition Enabled): **scrn saver OFF**, **text by code**, **text by key**, **clock by code, clock by key**.

4.4.33 Confirm Alarm

(Fig. 4.4, location 33). Here you determine that if 2 successive alarms will occur during a specific period, the second alarm will be considered as a **confirmed alarm** (for confirmed alarm reporting, see par. 4.5.12 REPORT CNF ALARM).

Options: **disable 30 min, 45 min, 60 min,** or **90 min.**

4.4.34 AC FAIL REP

(Fig. 4.4, location 34). Here you determine the time interval between AC power failure occurrence and the failure reporting. Options: **5 minutes, 30 minutes, 60 minutes** or **180 minutes.**

4.4.36 User Permission

(Fig. 4.4, location 36). Here you determine whether the access to the INSTALLER MODE requires user permission. If you select ENABLE, the installer mode will be accessible only through the user menu after entering the user code.

Options: **Enable**, **Disable**.

Note: *This menu is not available when partition is enabled.*

4.4.38 Battery Type

(Fig. 4.4, location 38). Here you determine which type of battery pack is used, so that the system will supply proper charge current.

Options: **7.2V** or **9.6V**.

4.4.39 Key Zones Options (Optional)

(Fig. 4.4, location 39). Here you determine whether or not the system can be armed and disarmed by zones 21-18, 29-30 or 21-30, provided that for these zones "non-alarm type" and "z-key enable" was predefined (see par. 4.3 and Appendix E9).

Key zones can be wireless or wired zones.

When using wireless key zones, only the MCT-100 and MCT-102 transmitters are used. The right pushbutton on the MCT-102 transmitter or input 2 of the MCT-100 transmitter is used for arming in AWAY mode. The left pushbutton on the MCT-102 transmitter or input 1 of the MCT-100 transmitter is used for disarming.

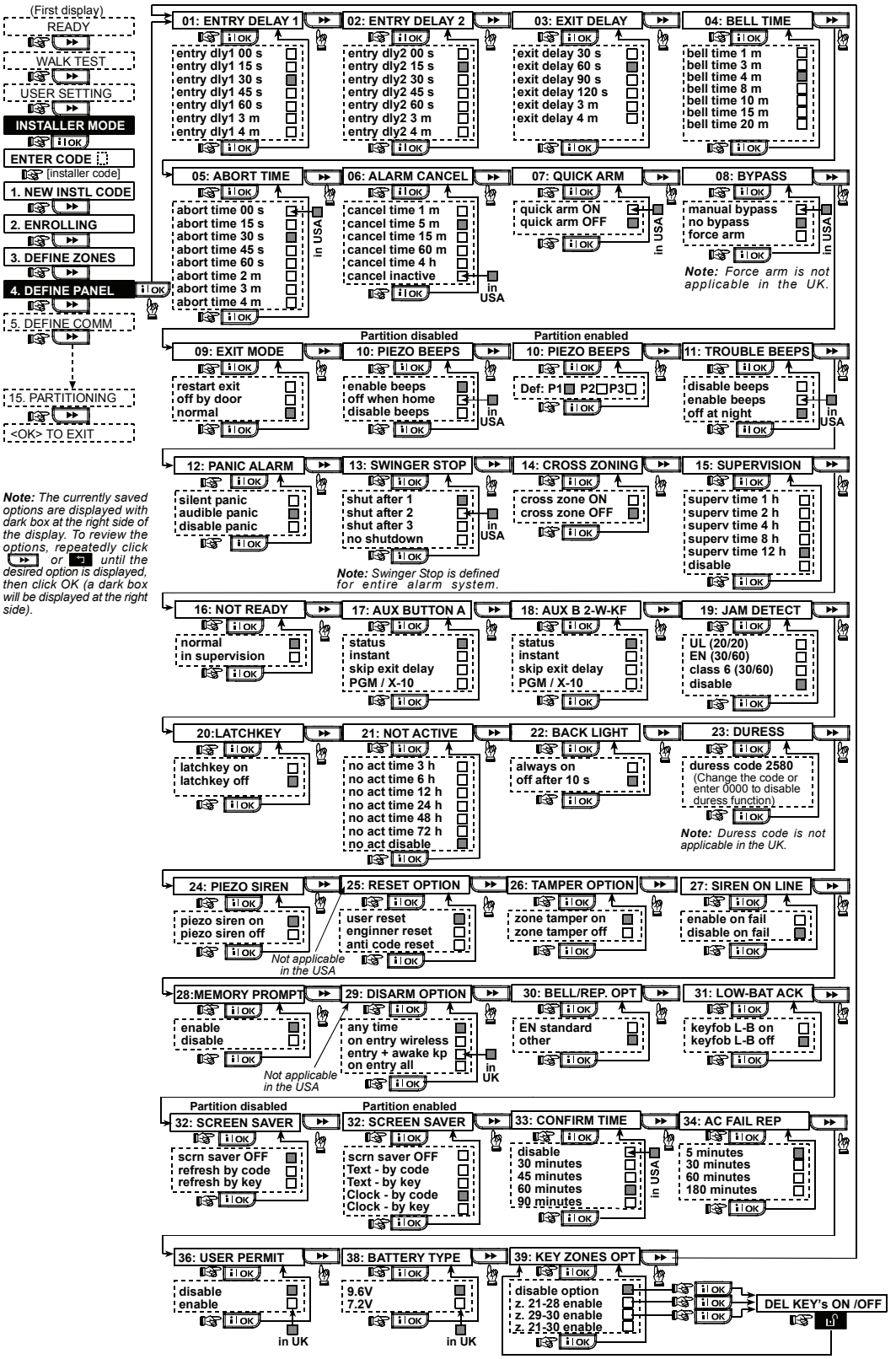
When using wired key zones an open circuit arms the alarm system in AWAY mode and a closed circuit changes the state of the alarm system from AWAY mode to Disarm. (For information on how to connect to wired key zones, see Fig. 3.1C Zones and Sirens Wiring.)

IMPORTANT! Enrolment of the MCT-100 or MCT-102 transmitter must be performed via the right pushbutton on the MCT-102 transmitter or input 2 of the MCT-100 transmitter (see section 4.3).

Note: *Key Zones does not comply with Belgium TO14A and EN 50131-5-3.*

Caution! Arming the system using a transmitter assigned to zones 21 and 28, or via wired zones 29 and 30 compromises security. This function is, therefore, only available in specific PowerMaxComplete versions according to the customer's request.

Options: **disable option**, **z. 21-28 enable, z. 29-30 enable,** or **z. 21-30 enable**.



Note: *The currently saved options are displayed with dark box at the right side of the display. To review the options, repeatedly click or until the desired option is displayed, then click OK (a dark box will be displayed at the right side).*

Figure 4.4 - DEFINE PANEL Flow Chart

4.5 DEFINING COMMUNICATION PARAMETERS

Preliminary Guidance

This mode allows you to adapt the telephone communication parameters to the local requirements.

Note: *Definining communcications via GPRS is applicable to PowerMaxComplete versions 5.2.07 and above.*

Compatible central station receivers are: Osborne-Hoffman model 2000, Ademco Model 685, FBII Model CP220, Radionics Model D6500, Sur-Gard Model SG-MLR2-DG and Silent Knight Model 9500.

IMPORTANT: *In telephone number locations and account number locations, you may be required to enter hexadecimal digits. In telephone number locations, these digits are used as codes to control the dialer:*

Hex. Digit	*Keying Sequence*	*Code Significance*
A	***<#> ⇒ <0>***	*Applicable only at the beginning of a number - the dialer waits 10 seconds or waits for dial tone, whichever comes first and then dials.*
D	***<#> ⇒ <3>***	*Applicable only at the beginning of a number - the dialer waits 5 seconds for dial tone and goes on hook if none is received.*
E	***<#> ⇒ <4>***	*Applicable only in the middle of the number - the dialer waits 5 seconds*
F	***<#> ⇒ <5>***	*Not applicable in phone numbers*

Note*: A "+" can be entered at the beginning of the line by pressing* # *and then* 1.

To enter a series of digits, use the following keys:
<Numeric keypad> - to enter the number
▶▶ - moves the cursor from left to right
◀ - moves the cursor from right to left
🔓 - deletes everything after the cursor (to the right).

4.5.1 PSTN / GSM (Fig. 4.5)

Area Code [Fig 4.5.1(1)]
Here you enter the system tel. area code (up to 4 digits).

Line Prefix [Fig 4.5.1(2)]
Here you enter the number that is used as a prefix to access an outside telephone line (if exists).

Dial Method [Fig 4.5.1(3)]
Here you determine the dialing method used by the automatic dialer built into the PowerMaxComplete control panel.
The options are: **Pulse** and **tone (dtmf)**.

GSM Keep Alive [Fig 4.5.1(4)]
Here you prevent the GSM service provider from disconnecting the GSM line if the user has not initiated any outgoing telephone calls during the last 28 days.
The options are: **disable** and **every 28 days**.
Note: *A test message is sent to the first available SMS number. If this does not exist then it makes a call to the first private number.*

4.5.2 GPRS / BB (Fig. 4.5)

The GSM/GPRS module is capable of communicating with the Central Station receiver by GPRS, GSM Voice and SMS channels. Each of the channels can be separately enabled or disabled in order to allow or prohibit the module from using it for the event reporting. If all channels are enabled, the GSM/GPRS module will always try GPRS first. If fails, it will try GSM Voice. If fails, it will try any other possible method (PSTN, Broadband) and only then it will try SMS. This is due to the fact that SMS is the most unreliable option of communication. Disabling any of the GSM Module channels will cause the module to use a different sequence than the one described above.

GPRS Report [Fig 4.5.2(1)]
Here you determine whether the alarm system will report events to the central station via the GPRS channel.
The options are: **disable** and **enable**.

GSM Report [Fig 4.5.2(2)]
Here you determine whether the alarm system will report events to the central station via the GSM voice channel.
The options are: **disable** and **enable**.

SMS Report [Fig 4.5.2(3)]
Here you determine whether the alarm system will report events to the central station via the SMS channel.
The options are: **disable** and **enable**.

GPRS APN [Fig 4.5.2(4)]
Here you enter the name of the APN (Access Point) used for the internet settings for the GPRS (up to 40 digits).

GPRS Username [Fig 4.5.2(5)]
Here you enter the username of the APN used for GPRS communications (up to 30 digits).

GPRS Password [Fig 4.5.2(6)]
Here you enter the password of the the APN used for GPRS communications (up to 16 digits).
The following table provides a list of the keys used by the PowerMaxComplete editor for the GPRS APN, GPRS Username, GPRS Password menus and Custom Zone Name option.

Key	Functionality
▶▶	Moves the cursor from left to right. Long press for speed.
◀	Moves the cursor from right to left. Long press for speed.
2	Scrolls upward the sequence of inserted digits. Long press for speed.
8	Scrolls downward the sequence of inserted digits. Long press for speed.
#	Places cursor to extreme right position of edit string and shows the last 16 digits of edit string.
⌂	Reverts to previous or top menu without saving the edit string.
🔒	Reverts to "<OK> TO EXIT" without saving the edit string.
OK	Saves and reverts to previous menu.
🔓	Clears all digits to the right of cursor.
0	Clears one digit by cursor.
5	Selects between uppercase or lowercase digits.

Note: *The "Й" digit replaces the "@" digit which is not included in the PowerMaxComplete editor.*

SIM PIN Code [Fig 4.5.2(7]
Enter PIN code of the SIM card installed in the PowerMaxComplete unit (up to 16 digits).

Force Home Network [Fig 4.5.2(8]
Here you determine whether to force the SIM card to use the home network only and not to select another network in case the home network cannot be found.
The options are: **disable** and **enable**.

LAN Settings [Fig 4.5.2(9)]

Note: *The LAN Settings menu appears only if a Broadband Module exists in the PowerMaxComplete alarm system.*

Enable DHCP [Fig 4.5.2(9a)]

Here you determine whether to obtain an IP address automatically using a DHCP server or to enter an IP address manually.

Toggles between **DHCP enable** and **DHCP disable**.

Note: *When DHCP is enabled, the last IP number will be changed to 200. In other words, it will take the form xxx.xxx.xxx.200.*

Manual IP [Fig 4.5.2(9b)]

Here you manually enter LAN parameters.

IP address – the IP address of the Broadband Module.

Subnet mask – the subnet mask used with the IP address.

Default GW – the default gateway of the Broadband Module.

Note: *If DHCP is set to enabled the above entries will be ignored.*

Session Timeout [Fig 4.5.2(10)]

Here you determine whether the control panel will stay continuously connected via GPRS communication, or, temporarily connected to receive event reports only.

The options are: **off on timeout** and **always ON**.

4.5.3 C.S. Reporting (Fig. 4.5)

Report Events [Fig 4.5.3(1)] – see note in Fig. 4.5

Here you determine which types of event will be reported to central stations. Due to lack of space in the display, abbreviations are used: alarm is "**alrm**", alert is "**alrt**" and open/close is "**o/c**". The asterisk (✳) is a separator between events reported to **central station 1** and events reported to **central station 2**.

Messages are divided by type into four groups:

No.	Group	Events Reported
1	Alarms	Fire, Burglary, Panic, Tamper
2	Open/close	Arming AWAY, Arming HOME, Disarming
3	Alerts	No-activity, Emergency, Latchkey, Gas, Flood, Temperature
4	Maintenance	Low-battery AC failure

"Alarm" group has the highest priority and "Alert" group has the lowest priority.

The selectable options are as follows:

Plan name	Sent to center 1	Sent to center 2
all -o/c ✳ backup	All but open/close	All but open/close if center 1 doesn't respond
all ✳ all	All	All
all-o/c ✳ all -o/c	All but open/close	All but open/close
all –o/c ✳ o/c	All but open/close	Open/close
all (–alrt) ✳ alrt	All but alerts	Alerts
Alrm ✳ all (–alrm)	Alarms	All but alarms
Disable report	Nothing	Nothing
all ✳ backup	All	All if cent. 1 doesn't respond

Note: *"**All**" means that all 4 groups are reported and also trouble messages - sensor / system low battery, sensor inactivity, power failure, jamming, communication failure etc.*

1st Report Method [Fig 4.5.3(2)]

Here you define the 1st priority of method used to report events.

The options are: **disable**, **cellular**, **broadband** and **PSTN**.

2nd Report Method [Fig 4.5.3(3)]

Here you define the 2nd priority of method used to report events. If the method defined to report events in the 1st priority fails, the control panel will attempt to report using the method defined in the 2nd priority (see notes in 1st Report Method).

The options are: **disable**, **cellular**, **broadband** and **PSTN**.

3rd Report Method [Fig 4.5.3(4)]

Here you define the 3rd priority of method used to report events. If the method defined to report events in the 2nd priority fails, the control panel will attempt to report using the method defined in the 3rd priority (see notes in 1st Report Method).

The options are: **disable**, **cellular**, **broadband** and **PSTN**.

Dual Reporting [Fig 4.5.3(5)]

Here you determine whether to report events using PSTN and cellular at the same time instead of waiting for the 1st method to fail before trying the 2nd method.

The options are: **disable**, **PSTN & broadband, PSTN & cellular** and **broadband & cell**.

Receiver 1 Account No. [Fig 4.5.3(6)] - see note in Fig. 4.5

Here you enter the number that will identify your specific alarm control system to the 1st central station. The number consists of 6 hexadecimal digits.

Receiver 2 Account No. [Fig 4.5.3(7)] - see note in Fig. 4.5

Here you enter the number that will identify your system to the 2nd central station. The account number consists of 6 hexadecimal digits.

PSTN/GSM RCVR1 [Fig 4.5.3(8)] - see note in Fig. 4.5

Here you program telephone number of the 1st central station (including area code, 16 digit max) to which the system will report the event groups defined in Report Events.

PSTN/GSM RCVR2 [Fig 4.5.3(9)] - see note in Fig. 4.5

Here you program telephone number of the 2nd central station (including area code, 16 digit max) to which the system will report the event groups defined in Report Events.

IP RCVR 1 [Fig 4.5.3(10)]

Here you enter the IP address of the IP receiver that is located in the 1st central station.

IP RCVR 2 [Fig 4.5.3(11)]

Here you enter the IP address of the IP receiver that is located in the 2nd central station.

SMS RCVR 1 [Fig 4.5.3(12)]

Here you enter the telephone number of the SMS receiver that is located in the 1st central station.

SMS RCVR 2 [Fig 4.5.3(13)]

Here you enter the telephone number of the SMS receiver that is located in the 2nd central station.

PSTN Report Format [Fig 4.5.3(14)] - see note in Fig. 4.5

Here you select the reporting format used by the control panel to report events to central stations.

The options are: ■ **SIA text** ■ **Contact-ID** ■ **SIA** ■ **4/2 1900/1400** ■ **4/2 1800/2300** ■ **Scancom** (see Appendix D - code lists).

4/2 Pulse Rate [Fig 4.5.3(15)] - see note in Fig. 4.5

Here you select the pulse rate at which data will be sent to central stations if any one of the 4/2 formats has been selected in PSTN Report Format.

The options are: **10**, **20**, **33** and **40** pps.

PSTN Report Retry [Fig 4.5.3(16)] - see note in Fig. 4.5

Here you determine the number of times the communicator will dial the central station's number via PSTN.

The options are: **2, 4, 8, 12** and **16** attempts.

GSM Report Retry [Fig 4.5.3(17)] - see note in Fig. 4.5
Here you determine the number of times the communicator will try to report via a cellular group (GPRS, GSM and SMS) to the central station.
The options are: **2, 4, 8, 12** and **16** attempts.

Lan Report Retry [Fig 4.5.3(18)] - see note in Fig. 4.5
Here you determine the number of times the communicator will try to report via the Broadband Module communication to the central station.

The options are: **2, 4, 8, 12** and **16** attempts

Auto Test Time [Fig 4.5.3(19)]
Here you determine the time at which the telephone line will be tested and reported to the central station.

Auto Test Cycle [Fig 4.5.3(20)]
Here you determine the time interval between consecutive telephone line test messages sent to the central station. The control panel performs this at regular intervals to verify proper communications.
The options are: **test every 5 hours, test every 1**, **2**, **5**, **7**, **14**, **30 days** and **test OFF**.

Line Fail Report [Fig 4.5.3(21)]

PSTN [Fig 4.5.3(21a)]
Here you determine if the PSTN telephone line disconnection will be reported or not and determine the delay between detection of line disconnection and the failure reporting. If the telephone line is disconnected, the message "tel line fail" will be stored in the event log.
The options are: **don't report, immediately, 5 minutes, 30 minutes, 60 minutes** or **180 minutes**.

GSM/GPRS [Fig 4.5.3(21b)]
Here you determine if the GSM/GPRS line disconnection will be reported or not and determine the delay between detection of line disconnection and report failure. If the telephone line is disconnected, the message "GSM line fail" will be stored in the event log.
The options are: **don't report, 2 minutes, 5 minutes, 15 minutes,** or **30 minutes**.

Broadband [Fig 4.5.3(21c)]
Here you determine if the Broadband Module line disconnection will be reported or not and determine the delay between detection of line disconnection and report failure. If the telephone line is disconnected, the event "BBA line fail" will be stored in the event log.
The options are: **don't report, 2 minutes, 5 minutes, 15 minutes,** or **30 minutes**.

PSTN Up / Down [Fig 4.5.3(22)]

Remote Access [Fig 4.5.3(22a)]
Here you give or deny permission to access the system and exercise control from a remote telephone.
The options are: **rem. access ON** and **rem. access OFF**.

Mast. Downl Code [Fig 4.5.3(22b)]
Here you determine the master installer 4-digit password for downloading/uploading data into/from the PowerMaxComplete memory.
Attention! If "0000" is used, it will not enable connection of the PowerMaxComplete to the PC for upload/download purpose.

Inst. Downl Code [Fig 4.5.3(22c)]
Here you determine the installer 4-digit password for downloading data into the PowerMaxComplete memory.
Attention! If "0000" is used, it will not enable connection of the PowerMaxComplete to the PC for upload/download purpose.

Upload Option [Fig 4.5.3(22d)]
Here you determine whether the PowerMaxComplete data can be uploaded into a computer while the system is in disarm state or at any time (in HOME/AWAY arming & disarm state).
The options are: **when system OFF** and **any time**

Up Download Tel# [Fig 4.5.3(22e)]
Here you enter the telephone number (up to 16 digits) of the UL/DL server.
Note: *Only for use with control panels monitored by compatible central stations. Leave empty if not used.*

GPRS Up / Down [Fig 4.5.3(23)]

My SIM Tel. # [Fig 4.5.3(23a)]
Here you enter the PowerMax SIM card telephone number. The central station dials this number when it needs to connect to the PowerMaxComplete for uploading / downloading data.

1st Caller ID# [Fig 4.5.3(23b)]
Here you determine the 1st IPMP receiver telephone number. When the PowerMaxComplete responds to an incoming call from the telephone number defined here, it creates a connection to the IPMP for uploading / downloading data.

2nd Caller ID# [Fig 4.5.3(23c)]
Here you determine the 2nd IPMP receiver telephone number. When the PowerMaxComplete responds to an incoming call from the telephone number defined here, it creates a connection to that IPMP for uploading / downloading data.

2 Way Voice Def. [Fig 4.5.3(24)]
Send 2 WV Code [Fig 4.5.3(24a)] - see note in Fig. 4.5
Here you determine whether the system will send two-way voice code to the central station (to turn the central station from data communication to voice communication state) by using pre-selected SIA or Contact-ID communication format only.
The options are: **send** and **don't send.**
Two Way Voice Central Stations [Fig 4.5.3(24b)] - see note in Fig. 4.5
Here you select the timeout for 2-way voice communication with Central Stations, or enable the central station to ring back for 2-way voice function. This option is applicable only after reporting an event to the central station. (The central station person can press [3] for listen-in", [1] for "speak out" or [6] for listening and speaking).
The options are: **10**, **45**, **60**, **90 seconds**, **2 minutes**, **ring back** and **disable** (no two-way voice communication).
Note: *If "Ring Back" is selected, you should select "Disable Report" for private telephone (see par. 4.5.4(1) - Reporting to Private Telephones), otherwise the central station will establish communication with the PowerMaxComplete (after an event occurrence) in the normal manner (and not after one ring).*

Ringback Time [Fig 4.5.3(24c)] - see note in Fig. 4.5
Here you determine the period during which the central station can establish 2-way voice communication with the PowerMaxComplete (after 1 ring), if:
A. Alarm type message was received by central station.
B. Ring Back function was selected [see par. 4.5.3(23b)].
The options are: **1**, **3**, **5** or **10** minutes.

Ambient Level [Fig 4.5.3(24d)]
Here you select the ambient noise level of the installation. If it is a relatively noisy environment, set it to High (default setting). If it is a very quiet environment, set to Low.
The options are: **low** and **high**.

Report Cnfrm Alarm [Fig 4.5.3(25)] - see note in Fig. 4.5
Here you determine whether the system will report whenever 2 or more events (**confirmed alarm)** occur during a specific period (see par. 4.4.33).
Available options are: **enable report, disable report, enable + bypass** (enabling report and bypassing the detector - applicable to PowerMaxComplete that is compatible with DD243 standard).

Recent Close [Fig 4.5.3(26)]
Here you enable or disable the "recent closing" report, that is sent to the central station if an alarm occurs within 2 minutes from the expiry of the exit delay.
The options are: **recent close ON** and **recent close OFF**.

Zone restore [Fig 4.5.3(27)]
Here you determine whether a zone restore will be reported or not.
The options are: **report restore** and **don't report**.

System Inactivity Report [Fig 4.5.3(28)]
Here you determine whether the central station will receive a message if the system is inactive (not armed) during a defined period (days).
The options are: **disable**, **rep. after 7d**, **rep. after 14d**, **rep. after 30d**, **rep. after 90d**.

Call Waiting OFF [Fig 4.5.3(29)]
Here you enter a code to cancel "call waiting" when calling the central station.

4.5.4 Private Report (Fig. 4.5)

Report To Private [Fig 4.5.4(1)]
Here you determine which event groups will be reported to private telephone subscribers. The options are as follows:

Term	Description
all	All messages
all (-op/cl)	All messages, except open/close
all (-alerts)	All messages, except alerts
alarms	Alarm messages
alerts	Alert messages
op/cl	Open/close
disable report	No message will be reported

***Note:** "**All**" means all events including the L. BAT and AC FAIL trouble messages.*

Voice report [Fig 4.5.4(2)]

1st Private Tel# [Fig 4.5.4(2a)]
Here you program the 1st telephone number (including area code, if required) of the private subscriber to which the system will report the event groups defined in Report To Private.

2nd Private Tel# [Fig 4.5.4(2b)]
Here you program the 2nd telephone number (including area code, if required) of the private subscriber to which the system will report the event groups defined in Report To Private.

3rd Private Tel# [Fig 4.5.4(2c)]
Here you program the 3rd telephone number (including area code, if required) of the private subscriber to which the system will report the event groups defined in Report To Private.

4th Private Tel# [Fig 4.5.4(2d)]
Here you program the 4th telephone number (including area code, if required) of the private subscriber to which the system will report the event groups defined in Report To Private.

Redial Attempts [Fig 4.5.4(2e)]
Here you determine the number of times the communicator will dial the called party's number (private telephone).
The options are: **1, 2, 3** and **4** attempts.
Attention! A maximum of 2 dialing attempts is permitted by the Australian Telecommunication Authority.

Two-Way Voice - Private Phones [Fig 4.5.4(2f)]
Here you determine whether 2-way voice communication with private telephones will be allowed or not.
The options are: **enable 2-way** and **disable 2-way**.

Tel. acknowledge [Fig 4.5.4(2g)]
Here you determine whether the system will use the single acknowledge or the all acknowledge mode when reporting to private telephones.
***Note:** In the single acknowledge mode, receiving an acknowledge signal from a single telephone is sufficient to consider the current event closed and call off the communication session. The remaining telephones serve for backup purposes only. In the all acknowledge mode, an acknowledge signal must be received from each telephone before the current event is considered reported.*
The options are: **single ack** and **all ack.**

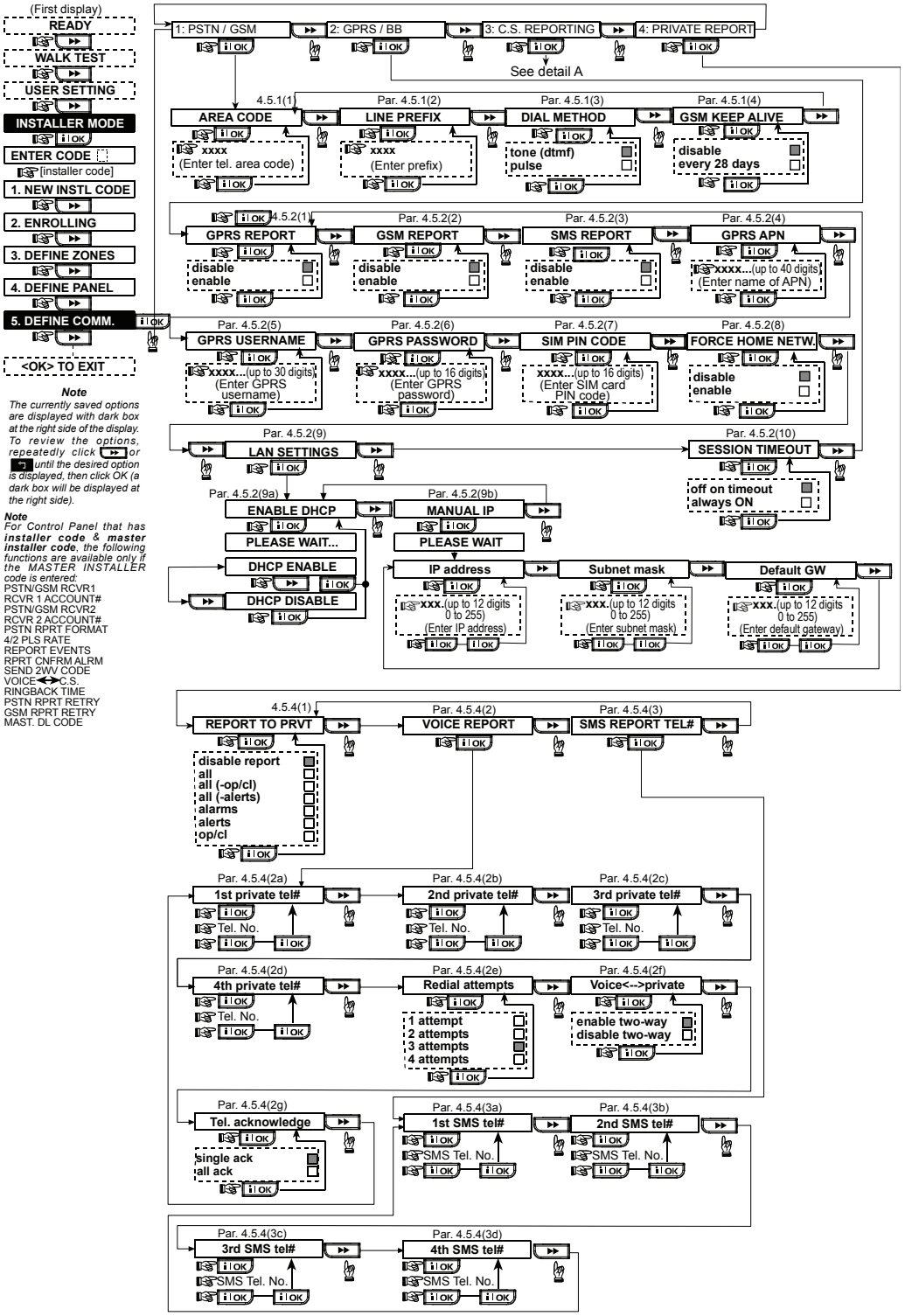
SMS Report Tel# [Fig 4.5.4(3)]

1st SMS Tel# [Fig 4.5.4(3a)]
Here you define the first SMS phone number (including area code, 16 digits maximum) to which pre-selected event types will be reported.

2nd SMS Tel# [Fig 4.5.4(3b)]
Here you define the second SMS phone number (including area code, 16 digits maximum) to which pre-selected event types will be reported.

3rd SMS Tel# [Fig 4.5.4(3c)]
Here you define the third SMS phone number (including area code, 16 digits maximum) to which pre-selected event types will be reported.

4th SMS Tel# [Fig 4.5.4(3d)]
Here you define the fourth SMS phone number (including area code, 16 digits maximum) to which pre-selected event types will be reported.



Note

The currently saved options are displayed with dark box at the right side of the display. To review the options, repeatedly click or until the desired option is displayed, then click OK (a dark box will be displayed at the right side).

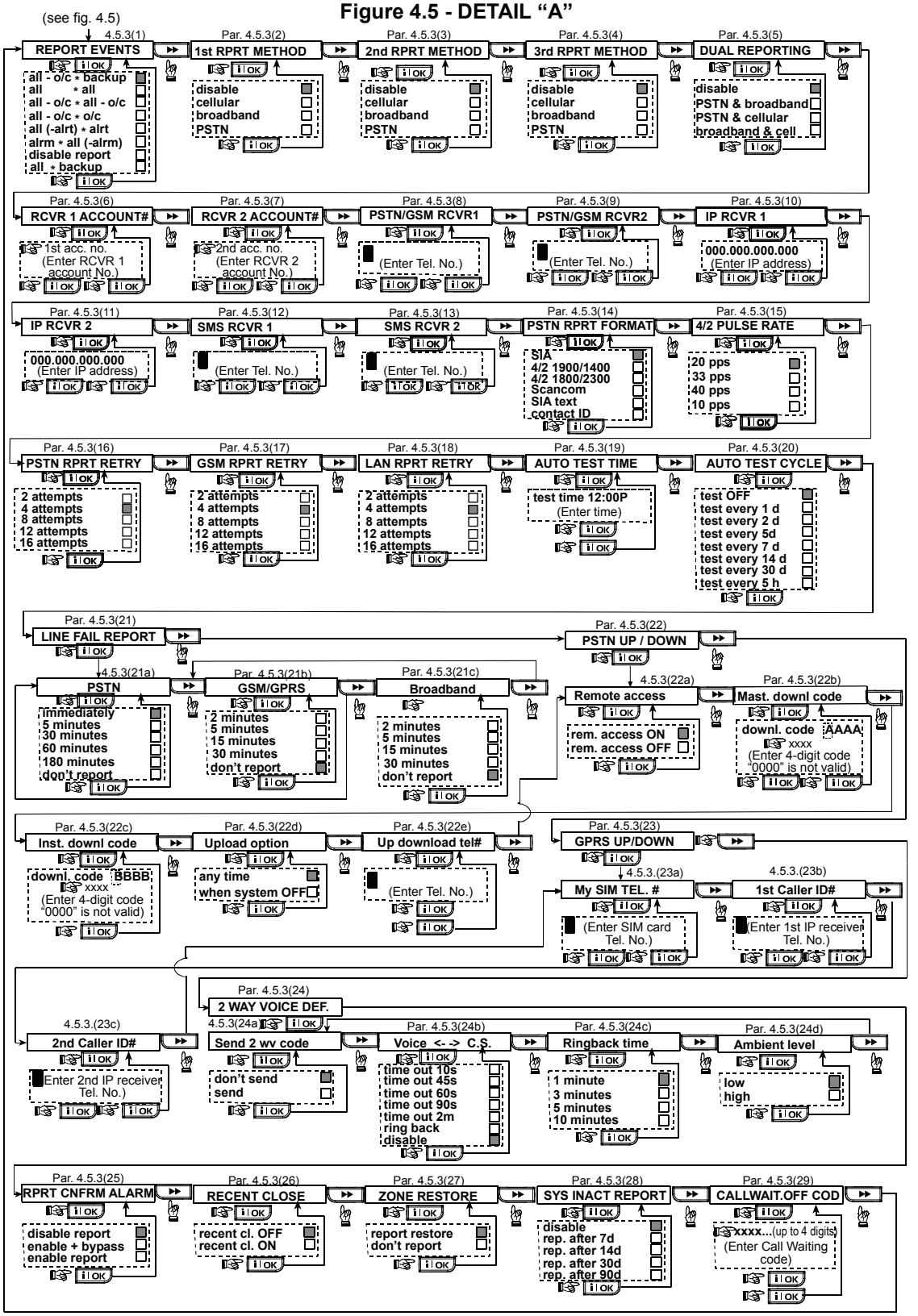
Note

*For Control Panel that has **installer code** & **master installer code**, the following functions are available only if the MASTER INSTALLER code is entered:*

PSTN/GSM RCVR1
RCVR 1 ACCOUNT#
PSTN/GSM RCVR2
RCVR 2 ACCOUNT#
PSTN RPRT FORMAT
4/2 PLS RATE
REPORT EVENTS
RPRT CNFRM ALRM
SEND 2WV CODE
VOICE<->C.S.
RINGBACK TIME
PSTN RPRT RETRY
GSM RPRT RETRY
MAST. DL CODE

Figure 4.5 – Defining Communications

Figure 4.5 - DETAIL "A"



4.6 GSM Auto Detection

The GSM modem auto detection feature enables automatic enrollment of the GSM modem into the PowerMaxComplete control panel memory. GSM modem auto detection is activated in one of two ways: after tamper restore and after reset (power-up or after exiting the installer menu). This causes the PowerMaxComplete to automatically scan GSM COM ports for the presence of the GSM modem.

In the event that the GSM modem auto detection fails and the modem was previously enrolled in the PowerMaxComplete control panel, the message "Cel Rmvd Cnfrm" will be displayed. This message will disappear from the display only after the user clicks i OK. The modem is then considered as not enrolled and no GSM trouble message will be displayed.

Note: *A message is displayed only when the PowerMaxComplete alarm system is disarmed.*

4.7 POWERLINK Auto Detection

The POWERLINK modem auto detection feature enables automatic enrollment of the POWERLINK modem into the PowerMaxComplete control panel memory. POWERLINK modem auto detection is activated in one of two ways: after tamper restore and after reset (power-up or after exiting the installer menu). This causes the PowerMaxComplete to automatically scan POWERLINK COM ports for the presence of the POWERLINK modem.

In the event that the POWERLINK modem auto detection fails and the modem was previously enrolled in the PowerMaxComplete control panel, the message "BBA Remvd Cnfrm" will be displayed. This message will disappear from the display only after the user clicks i OK. The modem is then considered as not enrolled and no POWERLINK trouble message will be displayed.

Note: *A message is displayed only when the PowerMaxComplete alarm system is disarmed.*

4.8 DEFINING OUTPUT PARAMETERS

4.8.1 Preliminary Guidance

This mode allows you:

a. Events/conditions selection under which PGM (programmable) output will function.
b. Selection of the internal siren or STROBE light (that will be activated according to system programming).

Note: *The PGM outputs operate on the entire alarm system and not per partition (in a PowerMaxComplete Partition system*.

4.8.2 Define PGM

For the PGM output, you can select **disable, turn on**, **turn off** or **pulse active** (turn on for predefined period, selected by **PULSE TIME**), as follows:

- **BY ARM AWAY (**upon AWAY arming).
- **BY ARM HOME** (upon HOME arming).
- **BY DISARM** (upon disarming).
- **BY MEMORY** (activated upon registration of an alarm in the memory, turned off upon memory clearing).
- **BY DELAY** (during exit / entry delays).
- **BY KEYFOB** (upon AUX button pressing in the keyfob transmitter / MCM-140+, if "**PGM**" is selected in "Define Panel" menu, locations 17 and 18).
- **BY ZONES** (by disturbance in each of 3 selected zones, irrespective of arming / disarming). If you select **toggle**, the PGM output will be turned on upon event occurrence in these zones and will be turned off upon next event occurrence, alternately.
- **BY LINE FAIL:** PGM output is ON if telephone line is disconnected.

4.8.3 Defining INT/STRB

Here you determine whether the INT output will be used for an internal siren or for a strobe. If strobe is selected, the INT output will be activated when an alarm occurs until the system is disarmed and rearmed again (i.e. clearing alarm memory).

4.8.4 PGM General Definition

Here you determine the PGM LOCKOUT TIME - daytime limits between which PGM output (that is controlled by sensors) will be off even when the associated sensors are triggered. To disable the lockout time, the START and STOP times should be identical (see figure 4.8).

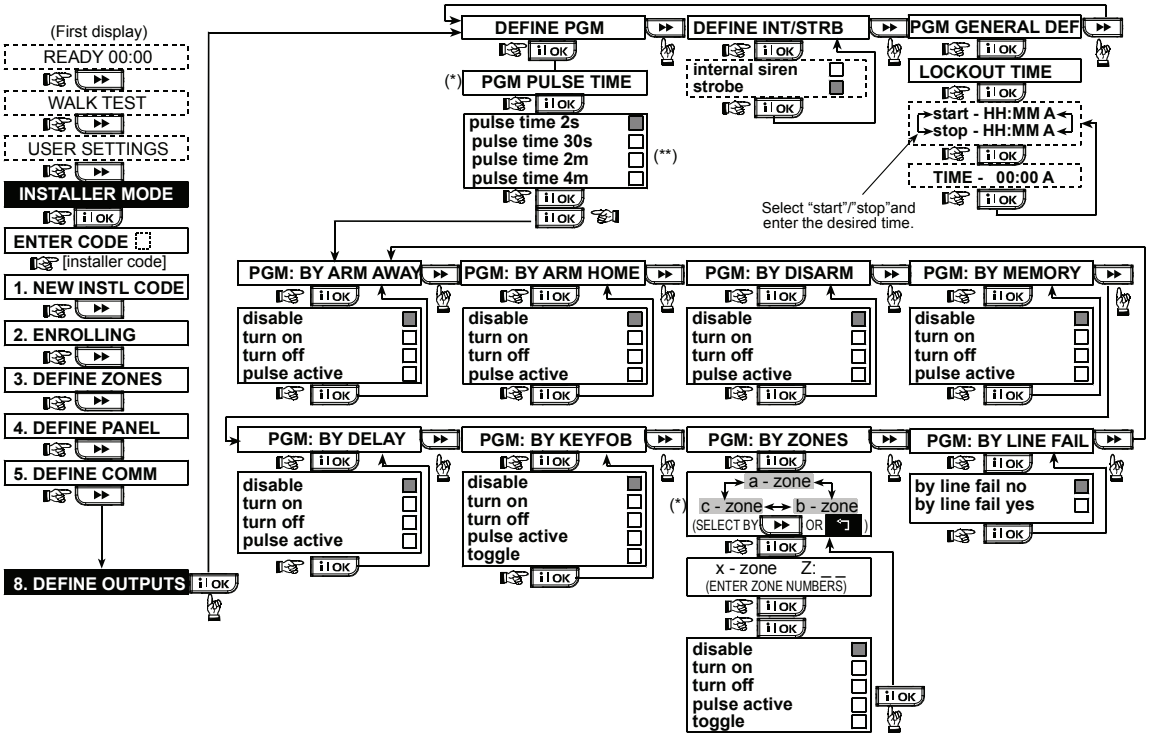


Figure 4.8 - Define Outputs Flow Chart

* Upon selecting any one of the 3 options (zone a, b and c) you may enter a zone number and then select "disable", "turn on", "turn off", "pulse active" or "toggle".

** The currently saved option is displayed with a dark box at the right side. To review the options, repeatedly click ▶▶ button until the desired option is displayed, then click OK (a dark box will be displayed at the right side).

4.9 DEFINE VOICE

DEFINE VOICE is optional - applicable only in PowerMaxComplete that includes "voice" feature.

4.9.1 Record Speech

This mode allows you to record short-duration speech messages for the following purposes:

- **House identity** is a message announced automatically when events are reported to private telephones.
- **4 User Names** can be recorded and assigned to users numbered 5-8. In case of event, the relevant user name will be added to the message that will be reported via the telephone.
- **5 custom zone names** can be recorded and assigned to specific zones. These names are useful if none of the 26 fixed zone names are found suitable for a certain zone (see Fig. 4.3).
- **Edit custom zone names** enables you to edit the names that have been assigned to zones.

The recording process is shown below.

4.9.2 Voice Box Mode

This mode allows you to determine whether two-way voice communication is to be sounded either via the optional external speech box, via the PowerMaxComplete, or via both.

Options: **No Voice Box**, **Voice Box Only** or **Voice Box Mixed**.

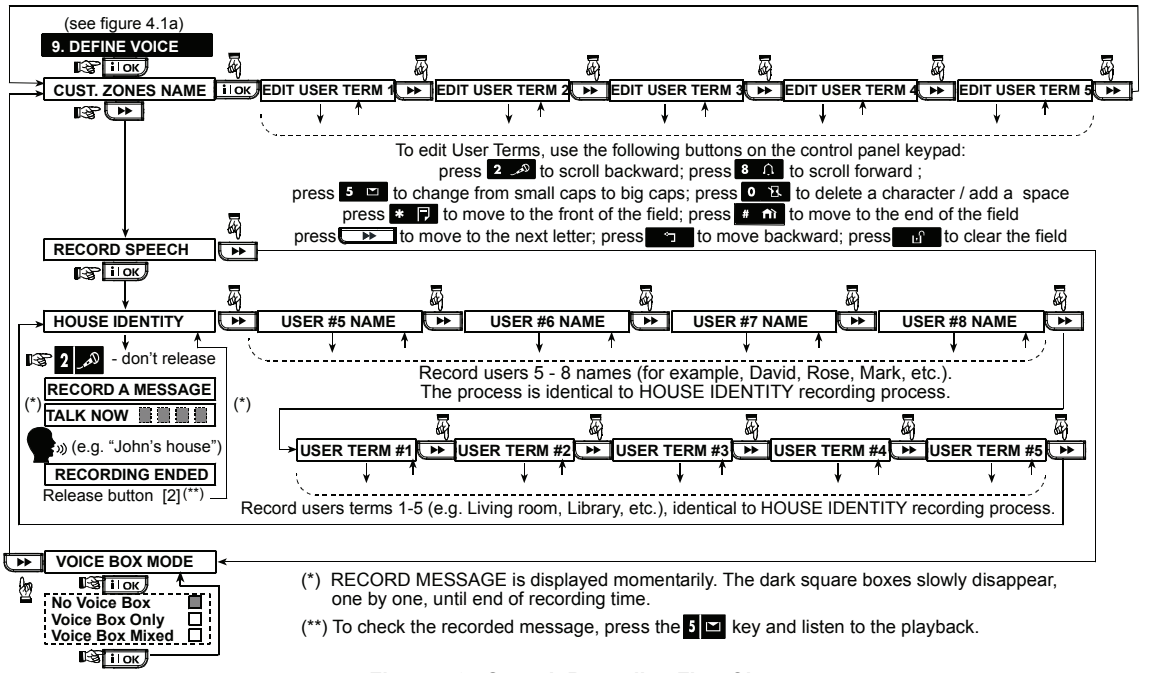

(see figure 4.1a)
9. DEFINE VOICE
CUST. ZONES NAME
EDIT USER TERM 1
EDIT USER TERM 2
EDIT USER TERM 3
EDIT USER TERM 4
EDIT USER TERM 5
To edit User Terms, use the following buttons on the control panel keypad:
press 2 to scroll backward; press 8 to scroll forward ;
press 5 to change from small caps to big caps; press 0 to delete a character / add a space
press * to move to the front of the field; press # to move to the end of the field
press to move to the next letter; press to move backward; press to clear the field
RECORD SPEECH
HOUSE IDENTITY
USER #5 NAME
USER #6 NAME
USER #7 NAME
USER #8 NAME
2 - don't release
RECORD A MESSAGE
TALK NOW
(e.g. "John's house")
RECORDING ENDED
Release button [2](**)
(*)
(*)
Record users 5 - 8 names (for example, David, Rose, Mark, etc.).
The process is identical to HOUSE IDENTITY recording process.
USER TERM #1
USER TERM #2
USER TERM #3
USER TERM #4
USER TERM #5
Record users terms 1-5 (e.g. Living room, Library, etc.), identical to HOUSE IDENTITY recording process.
VOICE BOX MODE
No Voice Box
Voice Box Only
Voice Box Mixed
(*) RECORD MESSAGE is displayed momentarily. The dark square boxes slowly disappear, one by one, until end of recording time.
(**) To check the recorded message, press the 5 key and listen to the playback.

Figure 4.9 - Speech Recording Flow Chart

4.10 DIAGNOSTIC TEST

This mode allows you to test the function of all protected area wireless sensors / wireless sirens / wireless keypads / GPRS / LAN connection / options for resetting the Broadband Module and to receive / review information regarding the received signal strength.

The diagnostic test process is shown in figure 4.10.

For WL Sensors / WL Sirens / WL Keypads:

Three reception levels are sensed and reported.

Received Signal Strength Indication:

Reception	Buzzer Response
Strong	Happy Tune twice (- - - ———) (- - - ———)
Good	Happy Tune (- - - ———)
Poor	Sad tune (———————)

***IMPORTANT!** Reliable reception must be assured. Therefore, **a "poor" signal strength is not acceptable**. If you get a "poor" signal from a certain wireless unit, re-locate it and re-test until a "good" or "strong" signal strength is received. This principle should be followed during the initial testing and also throughout subsequent system maintenance.*

4.10.1 GPRS Communication Test

The GPRS Communication diagnostic procedure tests GSM/GPRS communication and reports the diagnostic result. In case of communication failure, detailed information of the failure is reported.

The following GSM/ GPRS messages are reported:

Message	Description
Unit is OK	GSM / GPRS is functioning correctly.
GSM comm. loss	The GSM/GPRS module does not communicate with the Panel
Pin code fail	Missing or wrong PIN code. (Only if SIM card PIN code is enabled.)
GSM net. fail	Unit failed with registration to local GSM network.
SIM card fail	SIM not installed or SIM card failure.
GSM not detected	GSM auto enroll failed to detect GSM/GPRS module.
No GPRS service	The SIM card does not have the GPRS service enabled.
GPRS conn. fail	Local GPRS network is not available or, wrong setting to GPRS APN, user and/or password.
Srvr unavailable	IPMP Receiver cannot be reached – Check the Server IP
IP not defined	Server IP #1 and #2 are not configured.
APN not defined	APN is not configured.
SIM card locked	After entering a wrong PIN code 3 consecutive times the SIM is locked. To unlock it enter a PUK number. The PUK number cannot be entered by the PowerMaxComplete.
Denied by server	The IPMP denies the connection request. Check that the Panel is registered to the IPMP Receiver.

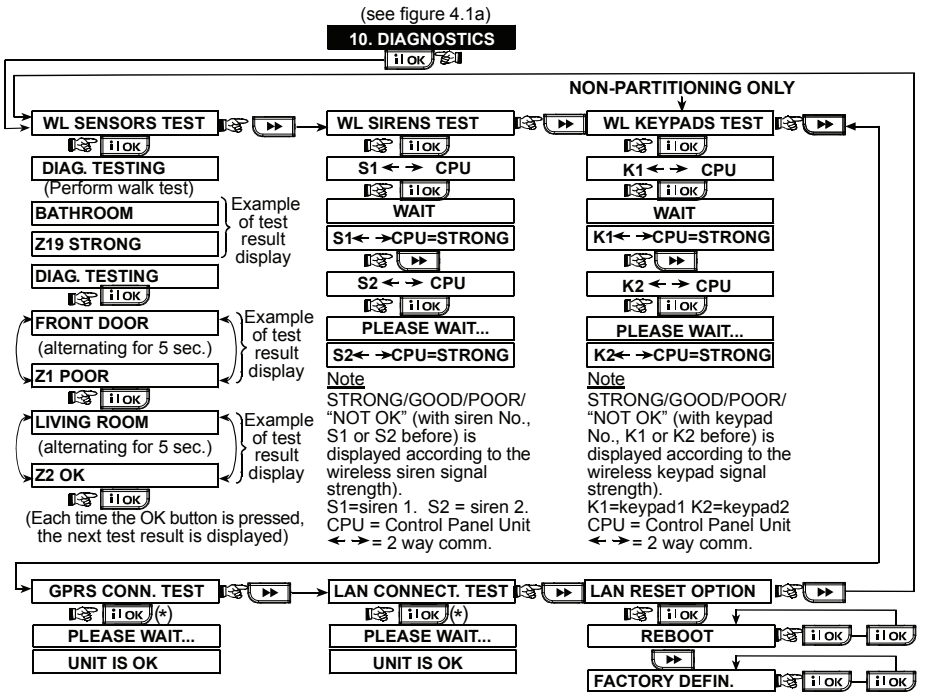
4.10.2 LAN Connection Test

The LAN Connection diagnostic procedure tests Broadband Module communication to the IPMP and reports the diagnostic result. In case of communication failure, detailed information of the failure is reported.

If the Broadband Module is not registered to the PowerMaxComplete, the menu "LAN CONNECT.TEST" will not be displayed.

The following LAN messages are reported:

Message	Description
Unit is ok	Broadband Module is functioning correctly.
Test aborted	The diagnostic test is aborted, as follows: • AC failure – Broadband Module is set to OFF mode. • Broadband Module has not completed the power-up procedure. In this case, the installer should wait a maximum of 30 seconds before re-testing.
Comm. loss	The RS-232 serial interface between the Broadband Module and the PowerMaxComplete failed.
Rcvr Ip missing	Receivers IP 1 and 2 settings are missing in the PowerMaxComplete.
Cable unplugged	The Ethernet cable is not connected to the Broadband Module.
Check lan config	This message appears in any of the following cases: • Incorrect Broadband Module IP has been entered. • Incorrect subnet mask has been entered. • Incorrect default gateway has been entered. • DHCP server failure.
Rcvr#1 UnReach. **Rcvr#2 UnReach.**	Receiver 1 or 2 is inaccessible, as follows: • Wrong receiver IP has been entered. • Receiver failure. • WAN Network failure.
Rcvr#1 UnReg. **Rcvr#2 UnReg.**	The PowerMaxComplete unit is not registered to IP receiver 1 or 2.
Broadband Module timeout err.	Broadband Module does not respond to test result within 70 sec.
Invalid result	Broadband Module responds with a result code that is not recognized by the PowerMaxComplete.



(*) When the OK button is pressed, the test result takes between 15 sec. to 4 mins. before it is displayed, depending on the severity of the failure.
See par. 4.10.1 for a complete list of possible GSM/GPRS messages and par. 4.10.2 for a complete list of possible Broadband Module messages.

Figure 4.10 - Diagnostic Test Flow Chart

4.11 USER FUNCTIONS

This mode provides you with a gateway to the user functions through the regular user programming menu. You may:

- Program the 4 (private) telephone numbers
- Program user codes
- Enroll keyfobs
- Enroll proximity tags
- Select the voice option
- Set the auto arm option
- Set arming time
- Set the squawk option
- Set the system time and time format
- Set the date and date format
- Set the time scheduler

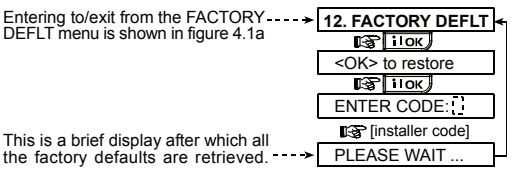
Refer to the User Guide for detailed procedures.

Caution! If after having programmed the user codes the system does not recognize your installer code, this indicates you must have programmed a user code that is identical with your installer code. If so, access the user menu and change the code that is identical with your installer code. This will re-validate your installer code.

4.12 RETRIEVING FACTORY DEFAULTS

If you want to reset the PowerMaxComplete parameters to the factory default parameters, you should enter the installer menu and perform the "FACTORY DEFLT" function, as described in the right side illustration. To get the relevant parameters defaults, contact the PowerMaxComplete dealer.

Note: *For PowerMaxComplete with 2 installer codes, INSTALLER code and MASTER INSTALLER code, only the master installer code enables to perform factory default function.*


Entering to/exit from the FACTORY DEFLT menu is shown in figure 4.1a
12. FACTORY DEFLT
i OK
<OK> to restore
i OK
ENTER CODE:
[installer code]
This is a brief display after which all the factory defaults are retrieved.
PLEASE WAIT ...

4.13 SERIAL NUMBER

The menu "13. SERIAL NUMBER" enables reading the system serial number for support purposes only. Clicking ▶▶ enables reading the version of the PowerMaxComplete unit.

4.14 CALLING UPLOAD/DOWNLOAD SERVER

Note:
This option is only used during the installation of panels monitored by compatible central stations.

This option allows the installer to initiate a call to the upload/download server. The server uploads the PowerMaxComplete configuration to its data base and can unload predefined parameters to the PowerMaxComplete.

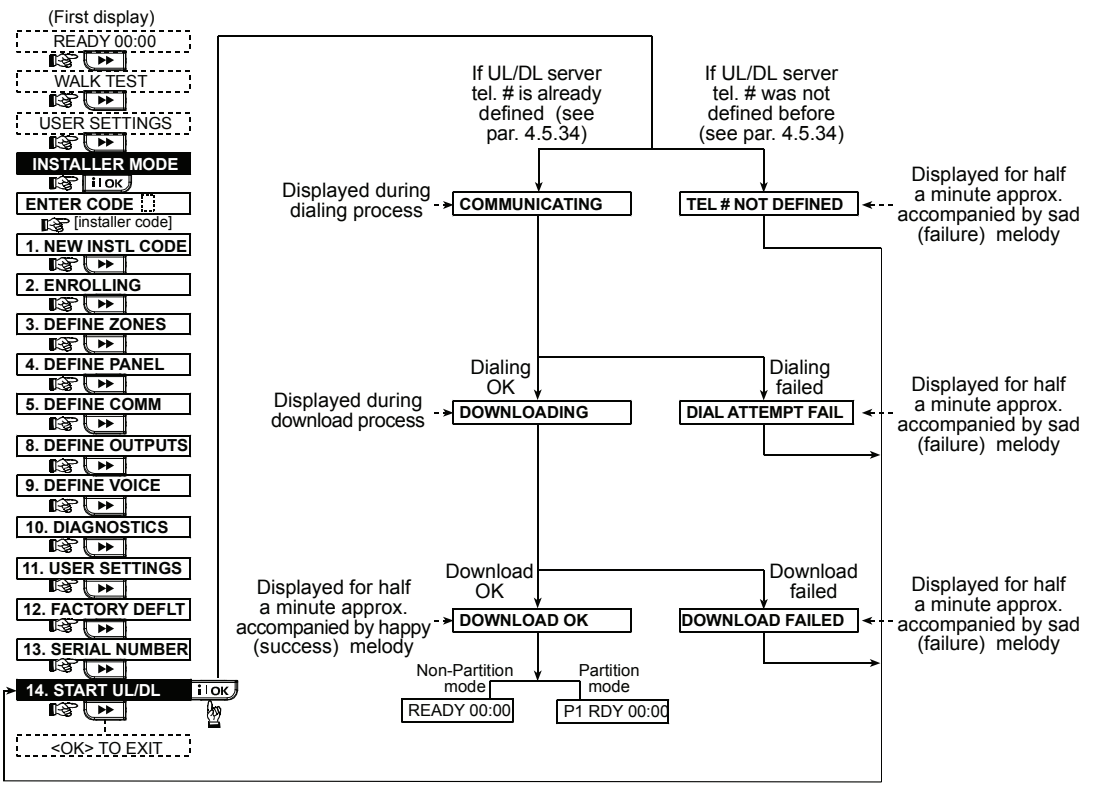


Figure 4.14 – Start UL/DL

4.15 ENABLING/DISABLING PARTITIONS

This menu allows you to enable/disable Partition Mode. Partitioning allows you to divide the system into a maximum of three independently controllable areas. Each area can be armed / disarmed separately.

When the partition feature is disabled, zones, user codes and features will operate the same as in a regular PowerMaxComplete unit. When partition is enabled, menu displays are changed to incorporate the partition feature.

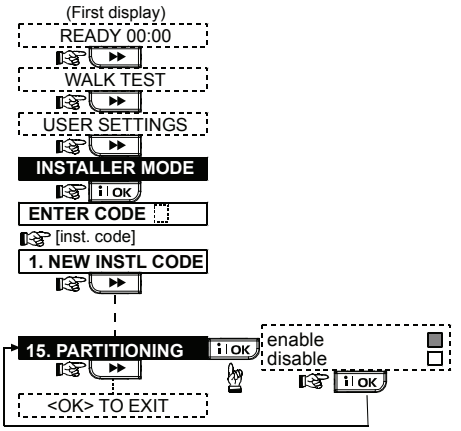


Figure 4.15 – Partitioning

4.16 WALK-TEST

This mode (see Figure 4.1a) provides you with the means to conduct a periodic test, via the walk-test menu, at least once a week and after an alarm event.

When you are instructed to perform "walk test", walk throughout the site to check the detectors / sensors. When a detector/sensor is triggered into alarm, its name, number and the alarm reception level should be indicated (for example, "Bathroom", "Z19 strong") and the buzzer should sound according to the alarm reception level (1 of 3).

5. TESTING PROCEDURES

5.1 Preparations

Make sure all windows and doors are closed and all zones are secured (undisturbed).

READY HH:MM

If the display is "NOT READY", query the control panel by pressing the OK button repeatedly. The source(s) of the problem(s) will be displayed and read aloud. Take the necessary measures to eliminate the problem(s) before testing the system (see next paragraph).

5.2 Diagnostic Test

To verify proper function of all detectors in the system, a comprehensive diagnostic test is required. To perform this test, refer to Figure 4.10.

5.3 Keyfob Transmitter Test

Initiate transmission from each transmitter enrolled as a keyfob unit (according to the list in Table B2, Appendix B). Use each transmitter to arm the control panel AWAY and immediately disarm it. Upon pressing the keyfob unit's AWAY key, the ARM indicator should light.

ARMING AWAY
↓
PLEASE EXIT NOW

The exit delay beeps will begin.

Press the keyfob unit's DISARM (🔓) key. The ARM indicator should extinguish, the announcement "Disarm, ready to arm" should be heard and the display should revert to:

READY HH:MM

Test the **AUX** button in each keyfob in accordance with the information noted in Table B2, Appendix B. Verify that the **AUX** button performs its duty as programmed.

- If the AUX (✻) button is defined as "STATUS", system status should be displayed and announced upon pressing the button.
- If the AUX (✻) button is defined as "INSTANT", press the AWAY button and then the AUX button. The response should be:

ARMING INSTANT
(alternating)
PLEASE EXIT NOW

and the exit delay beeps will start. Press the DISARM (🔓) key immediately to disarm.

- If the AUX (✻) button is programmed as "PGM" and permitted to activate the PGM output, pressing (✻) should activate the device wired to the PGM output.
- If the AUX (✻) button is defined as "skip exit delay", press the AWAY button and while you hear the exit beeps press the AUX button – the exit beeps will be stopped immediately and the system will be armed AWAY. Press the DISARM key (🔓) immediately to disarm the system.

5.4 PGM output ON/OFF Test

Go over the table in **Appendix C** column by column. If, for instance, the "**BY ARM AWAY**" column has an "X" marked, then arm AWAY the system and verify that the appliance that is connected to PGM output is actually activated upon AWAY arming.

Continue in the same manner in the following columns, always creating the state or event that will activate the appliance that is connected to PGM output. Verify that it is activated as programmed.

IMPORTANT! *Before testing "BY TIMER" and "BY ZONE", make sure that these forms of control are permitted - click* 9 *repeatedly and verify that the display shows:*

BY TIMER ON

and:

BY SENSOR ON

A dark box at the extreme right means that these functions are enabled.

The easiest way for test timed activation is to select the ninth item in the installer's menu ("**11. USER SETTINGS**") and set the system clock a few minutes before the relevant "start time". Do not forget to return the clock to the correct time after completion of this test.

5.5 Emergency Transmitter Test

Initiate transmission from each transmitter enrolled to an emergency zone (according to the list in Table B3, Appendix B).

Z22 EMERGENCY

(alternating)

Z22 VIOLATED

It is advisable to let the central station know that you are conducting this test, or just disconnect the telephone line from the PowerMaxComplete during the test, to prevent false alarms.

6. MAINTENANCE

6.1 Dismounting the Control Panel

A. Remove the screw that fastens the front unit to the back unit (see figure 3.1H).

B. Remove the 3 screws that fasten the back unit to the mounting surface (see figure 3.1A) and remove the control panel.

6.2 Replacing the Backup Battery

Replacement and first-time insertion of battery pack is similar (see figure 3.1C).

With fresh battery pack, correct insertion and tightened battery compartment lid, the TROUBLE indicator should extinguish. However, the "MEMORY" message will now blink in the display (caused by the "tamper" alarm you triggered when opening the battery compartment lid). Clear it by arming the system and immediately disarming.

6.3 Fuse Replacement

The PowerMaxComplete has two internal fuses that have automatic reset. Therefore, there is no need to replace fuses.

When over current condition occurs, the fuse cuts off the circuit current. Upon fault current being removed for several seconds, the fuse is automatically reset and allows current flow through the circuit again.

6.4 Replacing/Relocating Detectors

Whenever maintenance work involves replacement or re-location of detectors, always perform **a full diagnostic test according to par. 4.10.**

Remember! A "poor" signal is not acceptable, as stated at the end of the test procedure.

7. READING THE EVENT LOG

Events are stored in the event log. You can access this log and review the events, one by one. If the event log fills up completely, the oldest event is deleted upon registration of each new event.

The date and time of occurrence are memorized for each event.

When reading the event log, events are shown in chronological order - from the newest to the oldest. Access to the event log is provided by clicking the * key and not through the installer's menu. Reading and erasing process of the event log is shown in the next drawing.

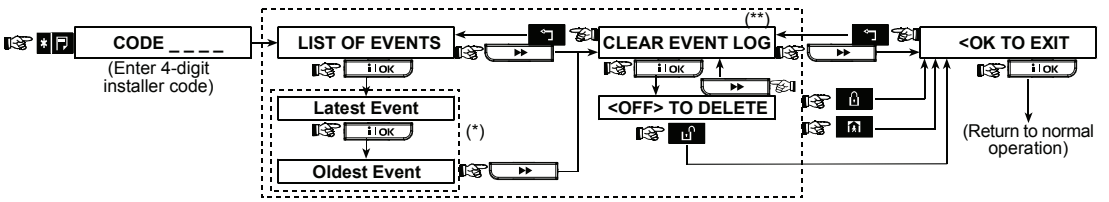


Figure 7 - Reading / Erasing the Event Log

* Event is displayed in 2 parts, for example, "Z13 alarm" then "09/02/00 3:37 P". The two displays will be shown alternately until clicking OK again to move to the next event or until the end of the event log (4 minutes).

** Applicable only if installer code is entered. Not applicable in European countries.

APPENDIX A. Partitioning

Your system is equipped with an integrated partitioning feature that can divide your alarm system into three distinct areas identified as Partition 1 through 3. Partitioning can be used in installations where shared security systems are more practical, such as a home office or warehouse building. When partitioned, each zone, each user code and many of your system's features can be assigned to Partition 1 to 3.

Note: *When Partition Mode is disabled, all zones, user codes, and features of the PowerMaxComplete will operate as in a regular unit. When partition mode is enabled, all zones, user codes, and features of the PowerMaxComplete are automatically assigned to Partition 1.*

Programming Partitions

Your system arrives with partitioning disabled.

To Enable Partitioning

A. Enter PowerMaxComplete installer Mode (see par. 4.1.5).
The PowerMaxComplete display will read"**1. NEW INSTL CODE**".

B. Click the ▶▶ button repeatedly until the PowerMaxComplete display will read:

```
15. PARTITIONING
```

C. Click i|OK. The PowerMaxComplete display will read:

```
Disable
```

D. Click the ▶▶ button. The PowerMaxComplete display will read:

```
Enable
```

E. Click the i|OK button. The PowerMaxComplete display will change to:

```
Enable
```

F. Click the i|OK button again to confirm the new setting.

Defining Zones

Partitioning is defined by zones that are assigned to each partition. During programming each zone should be assigned to one or more partitions.

To Define Zones

A. Enter PowerMaxComplete installer Mode (see par. 4.1.5).
The PowerMaxComplete display will read"**1. NEW INSTL CODE**".

B. Click the ▶▶ button twice. The PowerMaxComplete display will read:

```
3 DEFINE ZONES
```

C. Click the i|OK button. The PowerMaxComplete display will read:

```
ZONE No:--
```

D. Enter a zone number, for example, 05. The PowerMaxComplete display will read:

```
Z05: TYPE --
```

E. Proceed by setting the zone type, name and chime option (see par. 4.3).

F. After setting the chime option select **PARTITION**. If zone number was set to 05 the PowerMaxComplete display will read:

```
Z05:P1■ P2 P3
```

G. Press 1, 2 and 3 to select the desired corresponding partitions. If a zone is assigned to two or more partitions, this indicates that the zone is located in a common area and will behave according to the state of both partitions. (For a detailed description on common areas, refer to the "Common Areas" section below.)

H. Press i|OK twice to confirm the settings.

Enrolling Keyfobs and Keypads

This section provides instructions for enrolling keyfobs and keypads into the PowerMaxComplete system.

To Enroll a Keyfob

Keyfob transmitter enrolling involves the following steps:

A. Having entered your Installer Code successfully (see section 4.1.5), Click the ▶▶ button (repeatedly, if necessary) until the display will read:

```
2. ENROLLING
```

B. Click i|OK. The display will read:

```
ENROLLING TYPE
```

C. Click the ▶▶ button repeatedly until the display will read:

```
ENROLL KEYFOB
```

D. Click i|OK. The display will read:

```
KEYFOB No: _
```

E. Suppose that the Keyfob you are about to enroll is to be designated as Keyfob No. 5. Assuming that memory location No. 5 is free - no keyfob has yet been enrolled to it - click the <**5**> key. The display will change to:

```
KEYFOB No: 5
```

The clear space at the far right tells you that the memory location is free.

F. Click i|OK. The display will prompt you to initiate a transmission from the chosen keyfob:

```
TRANSMIT NOW
```

G. Initiate a transmission from the chosen keyfob by pressing any one of its pushbuttons. In response, the "Happy Tune" (- - - ——) will sound. When partition is disabled, the display will read:

```
KEYFOB No: 5
```

Proceed to step "K" below.
When partition is enabled, the display will read:

```
ACCESS TO PART
```

H. Click i|OK. The display will read

```
F01: P1■ P2 P3
```

I. Select the desired partitions that will be associated and can be controlled by this keyfob via pushbuttons 1, 2 and 3 on the control panel keypad.

J. Click i|OK. The display will read:

```
KEYFOB No: 5
```

A dark box will appear at the far right, indicating that the chosen Keyfob has been enrolled as Keyfob No. 5.

K. From this point on, you may continue in several different directions:

- If you wish to enroll another keyfob, select the desired number by:
  - Clicking ▸▸ to go up (6→7→8.....)
  - Clicking ↰ to go down (4→3→2.....)
  - Clicking ⌂ → <keyfob #>.
- To return to the main menu, click 🔒. This will bring back the display:

<OK> TO EXIT

You may now review and select any other mode on the User menu (by clicking ▸▸ or ↰).

To Enroll a Keypad

Keypad enrolling involves the following steps:

A. Having entered your Installer Code successfully (see section 4.1.5), Click the ▸▸ button (repeatedly, if necessary) until the display will read:

2. ENROLLING

B. Click i OK. The display will read:

ENROLLING TYPE

C. Click the ▸▸ button repeatedly until the display will read:

ENROLL WL 1WAY KP

D. Click i OK. The display will read:

1way kp No:

E. Suppose that the Keypad you are about to enroll is to be designated as Keypad No. 5. Assuming that memory location No. 5 is free - no keypad has yet been enrolled to it - click the **<5>** key. The display will change to:

1way kp No: 5

The clear space at the far right tells you that the memory location is free.

F. Click i OK. The display will prompt you to initiate a transmission from the chosen keypad:

TRANSMIT NOW

G. Initiate a transmission from the chosen keypad by pressing any one of its pushbuttons. In response, the "Happy Tune" (- - - ——) will sound. When partition is disabled, the display will read:

1way kp No: 5

Proceed to step "K" below.

When partition is enabled, the display will read:

ACCESS TO PART

H. Click i OK. The display will read

C01: P1 P2 P3

I. Select the desired partitions that will be associated and can be controlled by this keypad via pushbuttons 1, 2 and 3 on the control panel keypad.

J. Click i OK. The display will read:

1way kp No: 5

A dark box will appear at the far right, indicating that the chosen keypad has been enrolled as Keypad No. 5.

K. From this point on, you may continue in several different directions:

- If you wish to enroll another keypad, select the desired number by:
  - Clicking ▸▸ to go up (6→7→8.....)
  - Clicking ↰ to go down (4→3→2.....)
  - Clicking ⌂ → <keypad #>.
- To return to the main menu, click 🔒. This will bring back the display:

<OK> TO EXIT

You may now review and select any other mode on the User menu (by clicking ▸▸ or ↰).

User Interface and Operation

Refer to the PowerMaxComplete User Guide Appendix A PARTITIONING for a detailed description of the user interface (Arming/Disarming, siren behavior, show function, keyfobs operation, etc.), in Partition Mode.

Common Areas

Common areas are areas used as walkthrough zones to areas of 2 or more partitions. There may be more than one common area in an installation depending on the layout of the property. A common area is not the same as a partition; it cannot be armed / disarmed directly. Common areas are created when you assign a zone or zones to 2 or 3 partitions. Table A1 summarizes the behavior of the different zone types in a common area.

Table A1 – Common Area Definitions

Common area zone types	Definition
Perimeter	• Acts as defined only after the last assigned partition is armed AWAY or HOME. • In case that one of the partitions is disarmed, an alarm initiated from this zone is ignored for all assigned partitions.
Delay zones	• Delay zones will not trigger an entry delay unless all assigned partitions are armed. It is, therefore, not recommended to define delay zones as common areas.
Perimeter follower	• Act as defined only after the last assigned partition is armed AWAY or HOME. • In case that one of the partitions is disarmed, an alarm initiated from this zone is ignored for all assigned partitions. • In case that one of the common area assigned partitions is in a delay state (and the other partitions are armed), the alarm will behave as a perimeter follower for this partition only. The event will be ignored for other assigned armed partitions.
Interior	• Acts as defined only after the last assigned partition is armed AWAY. • In case that one of the partitions is disarmed or armed HOME, an alarm initiated from this zone is ignored for all assigned partitions.
Interior follower	• Acts as defined only after the last assigned partition is armed AWAY. • In case that one of the partitions is disarmed or armed HOME, an alarm initiated from this zone is ignored for all assigned partitions. • In case that one of the common area assigned partitions is in a delay state (and the other partitions are armed), the alarm will behave as an interior follower for this partition only. The event will be ignored for other assigned armed partitions.
Home / Delay	• Acts as a Perimeter-Follower type when all assigned partitions are armed AWAY. • Acts as a Delay type when at least one of the assigned partitions is armed HOME. • Will be ignored when at least one of the assigned partitions is disarmed.
Emergency **Fire** **Flood** **Gas** **Temperature** **24-hour silent** **24-hour audible** **Non-alarm**	• Always armed.

APPENDIX B. Detector Deployment & Transmitter Assignments

B1. Detector Deployment Plan

Zone No.	Partition	Zone Type	Sensor Location or Transmitter Assignment (in non-alarm or emergency zones)	Chime (Yes / No)	Controls PGM (X = YES)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29 (*)					
30 (*)					

Zone Types: *1 = Interior follower ✹ 2 = Perimeter ✹ 3 = Perimeter follower ✹ 4 = Delay 1 ✹ 5 = Delay 2 ✹ 6 = 24 h silent ✹ 7 = 24 h audible ✹ 8 = Fire ✹ 9 = Non-alarm ✹ 10 = Emergency ✹ 11 = Gas ✹ 12 = Flood ✹ 13 = Interior ✹ 14= Temperature ✹ 15= Home/Delay*

Zone Locations: *Note down the intended location for each detector. When programming, you may select one of 26 available zone names (plus 5 custom zone names that you can add - see Figure 4.3 - Define Zones).*

* Zones 29 & 30 only are hardwired zones.

B2. Keyfob Transmitter List

Transmitter Data				AUX button Assignments	
No.	Partition	Type	Holder	Status or Arming "instant"	PGM Control
1				Indicate the desired function (if any) – see par. 4.4.17 (Aux button).	Indicate whether this output will be activated or not – see par. 4.7.
2					
3					
4					
5					
6				**System status** ☐	**Yes** ☐ **No** ☐
7				**Arming "instant"** ☐	
8				**Skip exit delay** ☐	

B3. Emergency Transmitter List

Tx #	Transmitter Type	Enrolled to Zone	Name of holder
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

B4. Non-Alarm Transmitter List

Tx #	Transmitter Type	Enrolled to Zone	Name of holder	Assignment
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

APPENDIX C. PGM Output Assignment

Controlled Appliance	ON by arm HOME	ON by arm AWAY	ON by disarm	ON by Memory	ON by Delay	ON by Keyfob	ON by Timer		ON by Zone No.			ON by line fail
							ON Time	OFF Time	a	b	c	

APPENDIX D. Event Codes

Contact ID Event Codes

Code	Definition
101	Emergency
110	Fire
120	Panic
121	Duress
122	Silent
123	Audible
131	Perimeter
132	Interior
134	Entry/Exit
137	Tamper/CP
139	Burglary verified
151	Gas alarm
154	Flood alarm
180	Gas trouble
301	AC loss
302	Low system battery
311	Battery disconnect
313	Engineer reset
321	Bell
344	RF receiver jam detect
350	Communication trouble

Code	Definition
351	Telco fault
373	Fire detector trouble
381	Loss of supervision RF
383	Sensor tamper
384	RF low battery
393	Fire detector clean me
401	O/C by user
403	Auto arm
406	Cancel
408	Quick arm
426	Door open event
441	Armed home
454	Fail to close
455	Fail to arm
456	Partial arm
459	Recent close event
570	Bypass
602	Periodic test report
607	Walk test mode
641	Senior watch trouble

SIA Event Codes

Code	Definition
AR	AC Restore
AT	AC Trouble
BA	Burglary Alarm
BB	Burglary Bypass
BC	Burglary Cancel
BR	Burglary Restore
BT	Burglary Trouble / Jamming
BV	Burglary Verified
BZ	Missing Supervision
CF	Forced Closing
CI	Fail to Close
CL	Closing Report
CP	Auto Arm
CR	Recent Close
EA	Door Open
FA	Fire Alarm
FT	Fire Detector Clean
FJ	Fire detector trouble
FR	Fire Restore
GA	Gas alarm
GR	Gas alarm restore
GT	Gas trouble

Code	Definition
GJ	Gas trouble restore
HA	Holdup Alarm (duress)
LR	Phone Line Restore
LT	Phone Line Trouble
OP	Opening Report
OT	Fail to Arm
PA	Panic Alarm
QA	Emergency Alarm
RN	Engineer Reset
RP	Automatic Test
RX	Manual Test
RY	Exit from Manual Test
TA	Tamper Alarm
TR	Tamper Restore
WA	Flood alarm
WR	Flood alarm restore
XR	Sensor Battery Restore
XT	Sensor Battery Trouble
YR	System Battery Restore
YT	System Battery Trouble/Disconnection
YX	Service Required

4/2 Event Codes

Note: *The report to central station is on the following zones: First wireless siren - zone 31, second wireless siren - zone 32, GSM - zone 33, first 2-way keypad (MKP-150/MKP-151) - zone 35, second 2-way keypad (MKP-150/MKP-151) - zone 36.*

Alarms

Zone #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1st digit	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
2nd digit	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F

Restorals

Zone #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1st digit	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
2nd digit	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F

Supervisory trouble

Zone #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1st digit	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7
2nd digit	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	1	2	3	4	5	6	7	8	9	A	B	C	D

Low Battery

Zone #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1st digit	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	9	9	9
2nd digit	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	1	2	3	4	5	6	7	8	9	A	B	C	D

Forced Arming – 8 users

User No.	1	2	3	4	5	6	7	8
1st digit	A	A	A	A	A	A	A	A
2nd digit	1	2	3	4	5	6	7	8

Zone Bypass

Zone #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1st digit	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
2nd digit	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F

Panic / 24 Hours - 8 users

User No.	1	2	3	4	5	6	7	8	Panic CP	*Duress*
1st digit	2	2	2	2	2	2	2	2	2	*2*
2nd digit	1	2	3	4	5	6	7	8	9	A

Arm HOME and AWAY (Closing)

User No.	1	2	3	4	5	6	7	8	Cancel alarm	Recent Close
1st digit	E	E	E	E	E	E	E	E	E	E
2nd digit	1	2	3	4	5	6	7	8	9	C

Disarm (Opening)

User No.	1	2	3	4	5	6	7	8
1st digit	F	F	F	F	F	F	F	F
2nd digit	1	2	3	4	5	6	7	8

Trouble

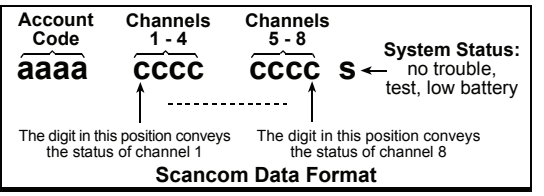
Event	Fuse Fail	Fuse Restore	Jamming	Jamming Restore	AC Failure	AC Restore	CPU Low Battery	CPU Low Battery Restore	CP Tamper
1st digit	2	2	2	2	1	1	1	1	1
2nd digit	C	D	E	F	1	2	3	4	6

Event	CP Tamper Restore	No Active	COMM. & LINE Restore	Enter Test	Exit Test	Auto Test
1st digit	1	1	1	1	1	1
2nd digit	7	8	A	D	E	F

Understanding the Scancom Reporting Protocol Data Format

The SCANCOM data format consists of 13 decimal digits divided into 4 groups, from left to right, as shown at the right side.
Each channel is associated with a specific event as follows:

1st "C": Fire	**5th "C":** Alarm cancel
2nd "C": Personal attack	**6th "C":** Emergency
3rd "C": Intruder	**7th "C":** Second alarm
4th "C": Open/close	**8th "C":** Trouble messages


Account Code
aaaa
Channels 1 - 4
cccc
Channels 5 - 8
cccc
s
System Status: no trouble, test, low battery
The digit in this position conveys the status of channel 1
The digit in this position conveys the status of channel 8
Scancom Data Format

APPENDIX E. Programmable Zone Types

E1. Delay Zones

A delay zone has exit and entry delays set by you in the course of programming the system. Warning beeps will sound throughout these delays, unless you choose to mute them.

- **Exit Delay** - The exit delay begins once the user arms the system. It allows him to leave via interior zones and a doorway before arming actually takes effect. When the exit delay starts, the buzzer beeps slowly and maintains a slow beeping rate until the last 10 seconds, during which it beeps rapidly. The PowerMaxComplete has two types of delay zones, for which different delay times may be set.
- **Entry Delay** - The entry delay begins once the user enters the protected area via a specific doorway (his entry is sensed by a delay zone detector). To avoid an alarm, he must reach the keypad via interior zones (which become "follower zones" during the entry delay) and disarm the system before the delay expires. When the entry delay starts, the buzzer beeps slowly until the last 10 seconds, during which it beeps rapidly.

E2. Emergency Zones

You can provide incapacitated, sick or elderly people with a miniature single-button transmitter to be carried on the neck like a pendant or to be worn on the wrist like a watch. In distress situations, they can press the button on their transmitter, causing the PowerMaxComplete to send an **emergency call** to the central monitoring station or to private telephones designated by the installer.

To make this possible, define the required number of zones as emergency zones and enroll a portable transmitter to each one of these zones. When completed, ask the master user to distribute these transmitters to their potential users.

E3. Fire Zones

A fire zone uses smoke detectors and is permanently active (a fire alarm is triggered regardless of whether the system is armed or disarmed). Upon detection of smoke, a **pulsating siren** sounds immediately and the event is reported via the telephone line.

E4. Flood Zone

A flood zone is permanently active (a flood alarm is triggered regardless of whether the system is armed or disarmed). Upon detection of flood leak, the event is reported via the telephone line.

E5. Gas Zone

A gas zone is permanently active (a gas alarm is triggered regardless of whether the system is armed or disarmed). Upon detection of gas leak, the event is reported via the telephone line.

E6. Home/Delay Zones

A zone type which functions as a delay zone when the system is armed HOME and as a perimeter-follower zone when the system is armed AWAY.

E7. Interior Zone

Interior zones are zones within the protected premises that have nothing to do with perimeter protection. Their most important feature is that they allow free movement within the protected area without initiating an alarm, provided that the system is armed in the "HOME" mode. People can therefore stay at home and move about freely, as long as they do not disturb a PERIMETER zone.
Once the system is armed in the AWAY mode (all zones are protected), interior zones will initiate an alarm if violated.

E8. Interior Follower Zones

"Interior Follower" zone is a zone that is located between entry/exit zone and the alarm system control panel. This zone is temporarily ignored by the alarm system during entry/exit delay periods, to enable you to walk (without causing an alarm) in front of a motion detector that is associated with the Interior Follower zone, after you enter through an entry zone on the way to the control panel, or when leaving the protected premises after system arming.

E9. Key Zones (Optional)

Key zones are zones that can be used for arming and disarming the system by MCT-100 and MCT-102 PowerCode transmitters that are enrolled to a zone. In addition, the alarm system may be armed / disarmed by a keyswitch when connected to wired zones 29 and 30.
Defining a zone as a KEY ZONE includes the following actions:

a. The zone should be defined as non-alarm type zone (see par. 4.3).
b. "Z-KEY ENABLE" should be selected for such a zone (see par. 4.3).
c. According to the zone number, "z. 21-28 enable", "z. 29-30 enable", or "z. 21-30 enable" should be selected in the DEFINE PANEL menu (see par. 4.4.39).

E10. Non-Alarm Zones

A non-alarm zone does not directly participate in the alarm system. Its main use is to perform auxiliary remote control tasks such as opening/closing a gate, activating/deactivating courtesy light and similar applications. No alarm, silent or otherwise, is associated with a non-alarm zone.
You can define the desired number of non-alarm zones and enroll a portable transmitter or a wireless device (detector) to this type of zone. Then, you must ensure that these zones are permitted to control the PGM output. Next, you can select the zones (3 at most) that will control PGM output.
Note: *A PGM output control can also be carried out by holders of all keyfob transmitters, by pressing the AUX [✳] button.*

This method will work provided that you programmed the [✳] button for PGM control (see Par. 4.4.17), and that you programmed the PGM output to be controlled by keyfob transmitters (see par. 4.8).

E11. Perimeter Zones

Perimeter zones rely on detectors designed to protect doors, windows and walls. An immediate alarm is initiated when such a zone is violated by opening the door/window or by trying to break the wall.

E12. Perimeter Follower Zones

A non-entry/exit zone, typically a perimeter zone located on an entry/exit path that is treated as an entry/exit zone during an entry/exit time.

E13. Temperature Zone

A temperature zone uses a wireless temperature detector to detect both indoor and outdoor temperatures and is permanently active. The detector monitors room temperature using an internal sensor. For outdoor or refrigerator installations, a waterproof temperature probe (optional) is used. There are a total of four fixed temperature points and the user can enable one or more temperature point.

Upon detection of change in temperature a digital message is transmitted and the event is reported.

E14. 24-Hour Zones

24 hour zones are mainly used for PANIC buttons, perimeter detectors and anti-tamper protection. They therefore trigger an alarm in both armed and disarmed states.

- **24 Hour Zone - Silent.** - Upon detection, this zone initiates a silent alarm, meaning that the sirens do not function. Instead the PowerMaxComplete dials telephone numbers and reports the event to central stations and/or to private telephones, as programmed.
- **24 Hour Zone - Audible.** - Upon detection, this zone initiates a siren alarm. The PowerMaxComplete also dials telephone numbers and reports the event to central stations and/or to private telephones, as programmed.

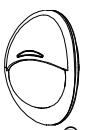
APPENDIX F. PowerMaxComplete Compatible Devices

F1. PowerMaxComplete Compatible Detectors

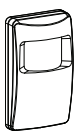
Each detector compatible with the PowerMaxComplete system is packed with its own installation instructions. Read them carefully and install as indicated.

A. PIR Motion Detectors

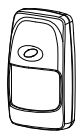
The wireless passive infrared (PIR) motion detectors used in the system are of the PowerCode type. The PowerMaxComplete is capable of "learning" each detector's identification code and linking it to a specific zone (see par. 4.3 in this Guide). Some units are shown below:



NEXT®
K9-85 MCW



MCPIR-3000
or K-940 MCW



DISCOVERY
K9-80/MCW

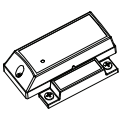
Note: *K-940 MCW, Discovery K9-80/MCW and NEXT® K9-85 MCW are pet immune units.*

In addition to its unique 24-bit identification code, each detector transmits a message, containing status information:

- The detector is in alarm (or not).
- The detector is being tampered with (or not).
- The battery voltage is low (or normal).
- "This is a supervisory message".

If any of these detectors detects motion, it sends out a message to the alarm control panel. If the system is in the armed state, an alarm will be triggered.

B. Magnetic Contact Transmitter

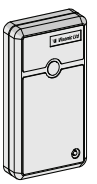


MCT-302

MCT-302 is a PowerCode magnetic-contact transmitter used to detect the opening of a door or a window. The alarm contacts are closed as long as the door or window remains closed.

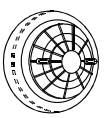
The unit has an extra alarm input that acts as if it were a separate wireless transmitter. It sends (or does not send) a "restored to normal" message to the alarm system, depending on the setting of an on-board "DIP" switch. The "restore" message informs you, through the control panel's display, whether the door or window is open or closed.

C. MCT-100 Wireless Adapter for Wired Detectors. MCT-100 is a PowerCode device used mainly as a wireless adapter for 2 regular magnetic switches installed on 2 windows in the same room. It has two inputs, behaving as separate wireless transmitters with different PowerCode IDs. Each input sends (or does not send) a "restored" message to the alarm system, depending on the setting of an on-board "DIP" switch.



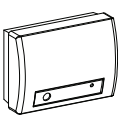
MCT-100

D. Wireless Smoke Detector MCT-425. A photoelectric smoke detector equipped with a PowerCode-type transmitter. If enrolled to a fire zone, it initiates a fire alarm upon detection of smoke.



MCT-425

E. Glass Break Detector MCT-501. An acoustic detector equipped with a PowerCode-type transmitter. Since it restores automatically after detection, this unit does not send a restoral message to the control panel.



MCT-501

F2 Compatible Transmitters

The PowerMaxComplete system is compatible with multi-button and single button key-ring and hand-held transmitters that use PowerCode and CodeSecure coding methods.

Multi-button PowerCode transmitters transmit the same code each time the same button is pressed. They can be used for emergency signaling, for activating the PGM output. **They can not be used for arming / disarming.**

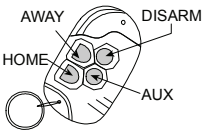
CodeSecure transmitters are of the rolling code type - they transmit a new code each time the same button is pressed. This provides a higher security level, especially in arming / disarming applications, because the code can not be copied ("grabbed") by unauthorized people.

Following are the basic details of several compatible transmitters. The possible applications for each push-button are indicated in each drawing.

A. MCT-234

'Keyfob' transmitter. You can program the AUX (auxiliary) button to perform various tasks, in accordance with the user's needs.

Pressing AWAY and HOME together for 2 sec. initiates PANIC alarm. Pressing AWAY for 2 sec. initiates Latchkey arming.

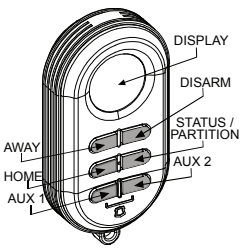


MCT-234

B. MCT-237

Two-way CodeSecure 6-button 'Keyfob' transmitter. You can program the AUX (auxiliary) buttons to perform various tasks, in accordance with the user's needs.

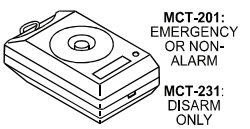
Pressing AWAY and HOME together for 2 sec. initiates PANIC alarm. Pressing AWAY twice within 2 sec. initiates Latchkey arming.



MCT-237

B. MCT-231 / 201*

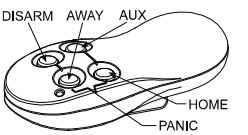
(N.A. in North America) Single-button pendant units. The MCT-231 (Code- Secure) and the MCT-201 (PowerCode) can be enrolled to perform functions as shown. Both units look alike.



MCT-231 / 201

C. MCT-134 / 104*

(N.A. in North America) 4-button hand-held units. MCT-134 (CodeSecure) can replace the MCT-234 keyfob. MCT-104 (PowerCode) can perform emergency and non-alarm functions. Both units look alike.

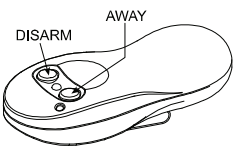


***NOTE:** BUTTON FUNCTIONS SHOWN ARE TRUE FOR MCT-134 ONLY*

MCT-134 / 104

D. MCT-132 / 102*

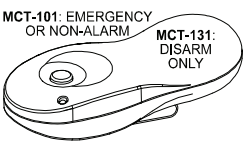
(N.A. in North America) 2-button units. MCT-132 (CodeSecure) can perform functions as shown. MCT-102 (PowerCode) can perform emergency and non-alarm tasks. Both units look alike.



MCT-132 / 102

E. MCT-131 / 101*

(N.A. in North America) Single-button units. The MCT-131 (CodeSecure) and the MCT-101 (PowerCode) can be enrolled to perform functions as shown. Both units look alike.



MCT-131 / 101

F. MCT-211*

Water-proof, wrist-worn Power-Code transmitter. Can be enrolled to perform emergency or non-alarm functions.

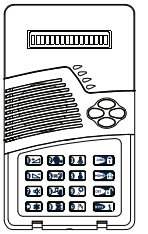
MCT-211

I. MKP-150/151

The MKP-150 / MKP-151 operates using two-way encrypted coded transmission and provides aural and visual indications. For each control panel, a maximum of two MKP-150 / MKP-151 keypad devices may be enrolled.

The device enables the user to arm/disarm the alarm system, to initiate emergency / fire / panic alarms and to turn lighting devices on and off.

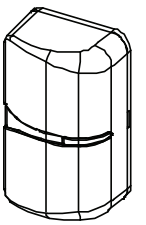
***Note:** MKP-150/151 is not compatible for use when partition is enabled.*



MKP-150/151

J. Contact transmitter MCT-320.

MCT-320 is a fully supervised, PowerCode magnetic contact transmitter, for use with PowerCode products. The transmitter includes a built-in reed switch (that opens upon removal of a magnet placed near it). The MCT-320 tamper switch is activated when the cover is removed or when the detector is removed from the wall. A periodic supervision message is transmitted automatically. The target receiver is thus informed, at regular intervals, of the unit's active participation in the system.



MCT-320

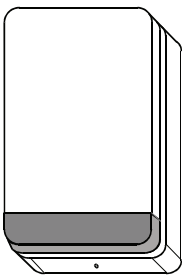
* Not UL listed.

F3 Compatible WL Siren

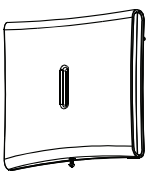
The MCS-710 / MCS-720 / MCS-730 (*) wireless siren can be integrated with the PowerMaxCompletein areas in which wiring action is difficult or impossible. The MCS-710 / MCS-720 / MCS-730 is a fully supervised, 2-way communication device (it includes a receiver, to receive activation commands from the alarm system, and a transmitter to periodically transmit its status signal to the alarm system).

When an identifiable activation command is received from the PowerMaxComplete, the siren activates its sounder and the flash light (strobe light every 1.5 seconds).

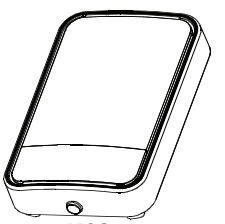
* Not UL listed.



MCS-710



MCS-720



MCS-730

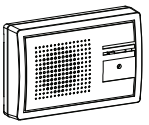
F4. PowerMaxComplete Compatible GSM Modem

The internal GSM modem enables the PowerMaxComplete system to operate over a cellular network. For details regarding the GSM modem features and connections, refer to the GSM Modem installation instructions.

Internal GSM

F5. Optional Speech Box (Voice enabled only)

The external Speech Box (optional) provides the PowerMaxComplete with two-way voice communication.



Speech Box

Industry Canada Declaration

This product meets the applicable Industry Canada technical specifications/Le présent materiel est conforme aux specifications techniques appliables d'Industrie Canada.

The Ringer Equivalence Number is an indication of the maximum number of devices allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the RENs of all the devices does not exceed five/L'indice d'équivalence de la sonnerie (IES) sert à indiquer le nombre maximal de terminaux qui peuvent être raccordés à une interface téléphonique. La terminaison d'une interface peut consister en une combinaison quelconque de dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de tous les dispositifs n'excède pas 5.

The Ringer Equivalence Number (REN) for this terminal equipment is 0.3B.

FCC Statement

If the equipment is causing harm to the telephone network, the telephone company may request to disconnect the equipment until the problem is resolved.

WARRANTY

Visonic Limited (the “Manufacturer") warrants this product only (the "Product") to the original purchaser only (the “Purchaser”) against defective workmanship and materials under normal use of the Product for a period of twelve (12) months from the date of shipment by the Manufacturer.

This Warranty is absolutely conditional upon the Product having been properly installed, maintained and operated under conditions of normal use in accordance with the Manufacturers recommended installation and operation instructions. Products which have become defective for any other reason, according to the Manufacturers discretion, such as improper installation, failure to follow recommended installation and operational instructions, neglect, willful damage, misuse or vandalism, accidental damage, alteration or tampering, or repair by anyone other than the manufacturer, are not covered by this Warranty.

The Manufacturer does not represent that this Product may not be compromised and/or circumvented or that the Product will prevent any death and/or personal injury and/or damage to property resulting from burglary, robbery, fire or otherwise, or that the Product will in all cases provide adequate warning or protection. The Product, properly installed and maintained, only reduces the risk of such events without warning and it is not a guarantee or insurance that such events will not occur.

THIS WARRANTY IS EXCLUSIVE AND EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, OBLIGATIONS OR LIABILITIES, WHETHER WRITTEN, ORAL, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE. IN NO CASE SHALL THE MANUFACTURER BE LIABLE TO ANYONE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS WARRANTY OR ANY OTHER WARRANTIES WHATSOEVER, AS AFORESAID.

THE MANUFACTURER SHALL IN NO EVENT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES OR FOR LOSS, DAMAGE, OR EXPENSE, INCLUDING LOSS OF USE, PROFITS, REVENUE, OR GOODWILL, DIRECTLY OR INDIRECTLY ARISING FROM PURCHASER'S USE OR INABILITY TO USE THE PRODUCT, OR FOR LOSS OR DESTRUCTION OF OTHER PROPERTY OR FROM ANY OTHER CAUSE, EVEN IF MANUFACTURER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

THE MANUFACTURER SHALL HAVE NO LIABILITY FOR ANY DEATH, PERSONAL AND/OR BODILY INJURY AND/OR DAMAGE TO PROPERTY OR OTHER LOSS WHETHER DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR OTHERWISE, BASED ON A CLAIM THAT THE PRODUCT FAILED TO FUNCTION.

However, if the Manufacturer is held liable, whether directly or indirectly, for any loss or damage arising under this limited warranty, **THE MANUFACTURER'S MAXIMUM LIABILITY (IF ANY) SHALL NOT IN ANY CASE EXCEED THE PURCHASE PRICE OF THE PRODUCT,** which shall be fixed as liquidated damages and not as a penalty, and shall be the complete and exclusive remedy against the Manufacturer.

When accepting the delivery of the Product, the Purchaser agrees to the said conditions of sale and warranty and he recognizes having been informed of.

Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so these limitations may not apply under certain circumstances.

The Manufacturer shall be under no liability whatsoever arising out of the corruption and/or malfunctioning of any telecommunication or electronic equipment or any programs.

The Manufacturers obligations under this Warranty are limited solely to repair and/or replace at the Manufacturer’s discretion any Product or part thereof that may prove defective. Any repair and/or replacement shall not extend the original Warranty period. The Manufacturer shall not be responsible for dismantling and/or reinstallation costs. To exercise this Warranty the Product must be returned to the Manufacturer freight pre-paid and insured. All freight and insurance costs are the responsibility of the Purchaser and are not included in this Warranty.

This warranty shall not be modified, varied or extended, and the Manufacturer does not authorize any person to act on its behalf in the modification, variation or extension of this warranty. This warranty shall apply to the Product only. All products, accessories or attachments of others used in conjunction with the Product, including batteries, shall be covered solely by their own warranty, if any. The Manufacturer shall not be liable for any damage or loss whatsoever, whether directly, indirectly, incidentally, consequentially or otherwise, caused by the malfunction of the Product due to products, accessories, or attachments of others, including batteries, used in conjunction with the Products. This Warranty is exclusive to the original Purchaser and is not assignable.

This Warranty is in addition to and does not affect your legal rights. Any provision in this warranty which is contrary to the Law in the state or country were the Product is supplied shall not apply.

Warning: The user must follow the Manufacturer’s installation and operational instructions including testing the Product and its whole system at least once a week and to take all necessary precautions for his/her safety and the protection of his/her property.

1/08

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